
CHIRURGICAL
TREATISES.

TRACTATUS hi Chirurgici si prelo mandentur,
magno id commodo Medicis pariter ac Chi-
rurgis cessurum judicamus.

*Georg. Ent, Eques Auratus, Colleg.
Regal. Med. Lond. Præses, M. D.*

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sor, M. D.*

Humphr. Brooke, Censor, M. D.

Tho. Franckland, Censor, M. D.

EIGHT
CHIRURGICAL
TREATISES,

George ON THESE *Stewart*
Following Heads :

- George* (VIZ.) *Stewart*
- | | |
|-------------------------------|----------------------------------|
| I. Of Tumours. | V. Of Wounds. |
| II. Of Ulcers. | VI. Of Gun-shot Wounds. |
| III. Of Diseases of the Anus. | VII. Of Fractures and Luxations. |
| IV. Of the Kings-Evil. | VIII. Of the Lues Venerea. |

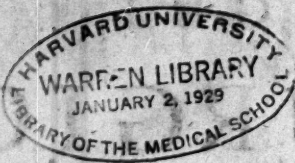
By RICHARD WISEMAN, Serjeant-
Chirurgeon to KING CHARLES the II^d.

George The Fourth EDITION. *Stewart*

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- VI. Of the Limbs.
- VII. Of the Head and Neck.
- VIII. Of the Thorax and Abdomen.
- IX. Of the Pelvis and Limbs.
- X. Of the Head, Neck, Thorax, and Abdomen.
- XI. Of the Head, Neck, Thorax, Abdomen, and Pelvis.
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By RICHARD D. W. M.D.
Surgeon to King's College Hospital

London

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~~Charles II.~~
TO THE
MOST SACRED MAJESTY
OF
CHARLES II.
KING

OF
GREAT-BRITAIN,
FRANCE and IRELAND, &c.

ARE
HUMBLY DEDICATED
THESE
Chirurgical Labours

OF
His MAJESTY's

most Faithful Servant,

and Loyal Subject,

1713
Rich. Wiseman.

October

TO THE
SOCIETY OF THE

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THE EPISTLE TO THE READER.

READER,

THE Nobility and Dignity of Chirurgery, are too well known to want the help of an Oratour to set them forth. If a Panegyrick were necessary, it were best made by running through the Particulars of the Art, and the History of the Diseases cured thereby. He that shall duly consider the deplorable Misery of Mankind, and how much it wanteth relief in such a multitude of Instances, must needs acknowledge us to be, what Antiquity hath long since call'd us, (*viz.*) The Hands of God. Indeed the ancient Græcians, in the days of Ignorance and Idolatry, did not stick to testifie their reverence of the Eminent Men of the Profession, by referring them into the number of the Gods which they worship'd. Nor have the latter Times, though wiser than to rise to such extravagancy, been backward in expressing their esteem of us; which, notwithstanding, they have guided with more discretion and usefulness. Instead of such Deification and fabulous Stories, they have rewarded us with Honour, Wealth, and Collegiate Foundations both in Universities and great Cities. Among which sort, our own Society in the City of London, establish'd by Kings, and frequently encourag'd by fresh Grants from them, ought to have an honourable mention; the Professors of which have contributed so much to the Improvement of the Faculty, and to the Honour of the Nation. The Anatomical part hath been signally promoted in it, so as to render it famous all over Europe, and every year to invite Foreigners to attend our Lectures from beyond the Seas. It had like to have done as great things in the Institutionary part of Chirurgery, had the learned Lectures of that excellent Chirurgeon, Doctor Read, been continued by a succession of such Professors. It being reasonable to imagine, that the Curiosity and Industry that hath been so eminent in our Nation in the Anatomical part, would have been the like in that also. Since it hath been our unhappiness to have that neglected, I hope it will not be ill taken, if we that are Members of it do supply this defect by our own private Labours. This hath been already done by Mr. Clowes, Mr. Woodall, and some others, whose laudable Example I have adventured

The EPISTLE

to follow, and to put my own Papers in Print ; that what was at first intended for my private satisfaction, may be useful to others, as well as to my self. In doing this, Reader, I have made a *Virtue of Necessity*, and employed those hours for the Publick service, which a frequently-repeated Sicknes hath for this twenty years last past deny'd me the use of in my private Occasions. It hath pleased GOD, by casting me into such a condition, to give me opportunity of Reading and Thinking, as well as Practising : Both which are necessary to the accomplishment not only of an Author, but indeed of a Chirurgeon. I cannot be so uncharitable to my Brethren, as to wish them the like Sicknes, to oblige them to the like Retirements for Contemplation and Study : But I do heartily wish, that what was Necessity in me, may be Choice in them, viz. That they would set a-part some Time for reflection upon their Labours, and for comparing the Empirical part of the Profession with the Rational. They will soon find how many Gaps do still lie open in this goodly Fabrick, and how much is wanting to make the Building compleat. What Defects do remain even in the History of Diseases themselves, and the plain practical things, wherein every expert Chirurgeon can correct the Authors he reads ? This, well consider'd, cannot but spur him on to add his Observations to the bulk of what hath been heretofore heaped up for this purpose, and to contribute his Endeavours to the finishing of what hath been begun, and thus far carried on, by other hands. As to my own Performance, Reader, I must tell thee, That what I have chiefly aimed at in this Book, hath been Perspicuity and Conciseness in the Institutionary part of the same, and aptness in the annexed Observations ; that so the whole may be made Easie to the young Chirurgeon, and as Instructive as may be. In all which, I doubt not but the farther he goeth on in Practice, the more of Clearness and Plainness he will find ; and the whole so much better perform'd than a meer Academick could have done it, without being a Practitioner himself ; as a Traveller can describe a Country to one that is taking a Journey into it, more sensibly and usefully than one that hath only read of it, and seen it in Maps.

Know, Reader, that as to these Treatises, though in preparation to them I have read all the eminent Chirurgical Authors, yet in the writing of them I was more conformed to my own Judgment and Experience, than other Men's Authority. This will consequently make them liable to the Censure of many sorts of Men. Such Ancient Practitioners as are unwilling to be now learning a new lesson, will be angry that those Definitions and Descriptions, and sometimes Methods of Cure, are receded from, which they learned when young ; those being the basis on which they have built the whole superstructure of their Practice. I desire such Men to content themselves with neglecting them ; they being not written for their Use, but for younger Men, who have their Principles and Maxims of Chirurgery yet to chuse. Others, wholly taken up with the Novelties wherewith this Age aboundeth, will be angry that all the new Notions
are

to the READER.

are not here pursued to Nicety; and many little, both Anatomical and Chymical Punctilio's inserted and brought in on all occasions, instead of the old way of expressing the Accidents of Diseases, with their Causes and Cure. I would have these Men consider, that I am a Practiser, not an Academick: that I delight in those things as far as they are useful to Life, but thought it too great a Digression from my present Purpose, to stuff up a Practical Book with such Philosophical Curiosities, which become it just as well, as it would become a Divine to fill a Practical Discourse with School-distinctions.

However, I resolving not to trust my self wholly with a Case of this nice Difficulty, did chuse a Friend to whose Judgment I did permit the whole, I mean the Learned Doctor Walter Needham of the Charter-house; who, upon perusal of my Papers, was pleased to approve of my Intention, and and withal, to alter what he thought fit in them; and always to cut off the Theory, when it adventured upon Controversial Discourses: still urging, that this was not intended for a Book of Controversie, but of plain Institution; not to make Men subtil Disputants, but good Practisers. I do confess, he did gratifie my humour in it, whose Inclinations wholly lie that way: But withal, I made bold sometimes to please my own fansie, in not always following his Advice, or obeying the Corrections he made. His Pardon I easily got, for so doing, he not affecting a Tyranny in Friendship: And I hope I shall thinne, (Reader,) if among many things that are here delivered, thou findest some not altogether to thy palate. Let what thou dost find acceptable to thee in this Treatise, excuse the Impertinence of the rest.

Thou art farther to be informed, that the writing of so large a Volume as thou now art presented with, is but a late Design, to which several of the particular Tracts, some of which were publish'd four years since, others written about that time, did encourage me. One Attempt drew on another, till at length it grew to the Bulk thou seest. Which I do alledge in excuse of the Method of this Book; which, if it had been all written at once, might have been contrived all into a piece. But the lesser Treatises being written before the greater, I was not willing to dismember them again, or to write new Discourses on those Subjects which I had already handled fully. The young Chirurgeon will reap benefit by it, finding some of the most troublesome Diseases in Chirurgery treated of wholly under one view, which otherwise he must have found piece-meal delivered in several places. This Apology I chiefly made for the Treatise of the Kings-Evil, where many Diseases are discoursed of, which other Writers handle in other places of Chirurgery. It is sufficient to say, that I think most Instances of those Diseases do partake at least of that Malady, if not entirely to be that: and therefore, when I wrote the particular Treatise, it was fit to handle them there; and that being done, I saw no reason for taking them out again, to supply other Parts of the Book.

The EPISTLE, &c.

After all things are considered and weighed in this and other Chirurgical Discourses that are publick, and they compared with our success in Practice, we shall soon find cause of lamenting our own Weakness and Inability in the carrying on of so great a Work, as the recovery of Mankind out of those many Distempers to which various Misfortunes, and many-repeated successions of Intemperance, and other Accidents both without and within, have betray'd us for so many Ages together. When the young Chirurgeon shall find the Cure easie in the Theory, and appear so at first in the Practice too, yet suddenly deceive him with a Relapse, and not only once, but often, delude his best Endeavours: when the By-standers and Persons concerned shall begin to accuse him of Knavery in his proceeding, and think him to pull back a Cure, whilst he is only rolling Sisyphus his Stone, which will tumble down whether he will or not: He will then wish, that all other Practisers had done what I have in this Treatise, viz. recommended their Observations both successful and unsuccessful; thereby encreasing Knowledge in our Profession, and leaving Sea-marks for the discovery of such Rocks as they themselves have split upon before. For my part, I have done it faithfully, and thought it no disgrace to let the World see where I failed of success; that those that come after me, may learn what to avoid: there being more of Instructiveness often in an unfortunate Case than in a fortunate one; and more Ingenuity in confessing such Misfortunes which are incident to Mankind, and which have attended all my Brethren as well as my self; and will attend thee also, Reader, in spite of all thy Care and Diligence, if thou undertake the Employment. Thou wilt also learn one necessary piece of Humility, viz. not to trust too much on thy own Judgment, especially in Difficult Cases; but to think fit to seek the Advice of other Physicians or Chirurgeons, whose long Experience hath enabled them to assist thee in preventing the Accidents, and encourage thee to go on in the Work, or forewarn thee of the Danger. After thou hast thus defended thy self from the censure of Rashness, proceed boldly; and let thy Sincerity in thy Acting, be thy Warrant to hope for GOD's Blessing on thy Endeavours: and if these Papers prove any advantage to thee in them, remember with kindness the Labours of,

Thy Friend and Servant,

MAY 24.
1676.

Richard Wiseman.

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T

A
T R E A T I S E
O F
T U M O U R S.

The FIRST BOOK.

CHAP. I.

Of Tumours in general.

WHAT a *Tumour* is (when we understand a Disease by the Definition) is so sufficiently explain'd by *Galen*, that I shall not trouble my self with any farther Disquisition about it. It is by him defined, *A Disease in which the Parts of the Body recede from their natural state by an undue encrease of their bigness.*

Now by what Names the Ancients did express a Tumour in general, many of which were afterwards appropriated to the particular Species of it, as *Oedema, Apostema, Phyma, &c.* I shall leave to the Criticks and Men of leisure to enquire : it shall suffice me, that my Definition tells you what I mean.

The Causes of Tumours are variously delivered by sundry Authors, with a larger repetition of which I shall not here trouble you. What my own thoughts suggest to me out of them upon this subject, is this in short, *viz.* that they must be considered either with regard to their Time and Place, or to the Matter of which they consist.

I. In regard to their Time and Place, we call them, 1. Antecedent, 2. Conjunct.

1. By an *Antecedent* Cause, I mean that which yet hath not actually produced a Tumour, but is throughly mixed with the Blood, or otherwise lodged in some convenient Place where it is not troublesome to nature, at least not to this Part ; though it have a great inclination to be so, and, if not prevented, doth produce the feared effect. Of this sort I reckon all Impurities in the Blood which do not yet start out into the solid Parts : as the Matter of an *Erysipelas, Pblegmon, Parotis, Bubo, &c.* before a Crisis is made ; so also any Tumour in the Body, which, lying in any Part of it, is apt to be translated to another. This, though it may be the conjunct cause of the Tumour of the part where it is now lodged, is the Antecedent Cause of that Tumour which it raiseth in another place, to which it may be after derived, &c.

2. By a *Conjunct* Cause, I mean the very Matter of the Tumour that is already impacted into the Part, by others call'd the *Causa Continens* : upon the encrease of which, the Tumour encreaseth ; on the diminution of it, it diminisheth.

II. In regard of the Matter of which they are made, we do usually attribute their Original to, 1. Humour, 2. Wind, 3. the interposition of a solid Body.

Humour
by Fluxi-
on:

First, *Humour* produceth Tumour, by, 1. Fluxion, 2. Congestion.

1. *Fluxion* is the sudden motion of Humours in the Body to any Part, and commonly depends upon one or more of these following Causes: 1. the Part transmitting; 2. the Part recipient; 3. the condition of the Humour.

(1.) *The Part transmitting*, doth cause sudden Fluxion, when being it self strong, it is provoked by the heat, sharpness, quantity, or other fault of a Humour; and, being so provoked, translates it to some weaker Part, whether External, or Internal. This is most evident in the Crisis of Fevers, from which the Humour is often discharged inwardly by the way of *Phlegmon* upon the inward *Viscera*; or outwardly in the form of an *Erysipelas*, *Bubo*, *Parotis*, *Carbunculus*, &c.

2. *The Part recipient*, is the Cause of Tumours, either, 1. Passively, or, 2. Actively.

1. *Passively*, When it receives Humours, and cannot expel them: whether it be through its weakness, laxity of Pores, over-wideness of Vessels, as in a *Varix*; or their too great streightness or obstruction, its position in a declining part, or its being disabled by external accidents, as Bruise, Fall, &c.

2. *Actively*, When it attracts Humours to it self: either, 1. through Heat, whether created by Humours already flowed, or by hot Medicines, Blistering-Plasters, the Sun, Fire, Cupping-glasses, &c. or, 2. Pain, from Corroding Medicines, Wounds, Bruises. I know this latter Head of Attraction may be quarrell'd at by some, who will reduce all Attraction to Pulsion, and so render other reasons of these accidents: But that troubles not me, who handle the Notion in a practical way, leaving the speculation to curious Men.

(3.) *The condition of the Humour*, is the third, and indeed, great Cause from which Tumours do arise: in the explaining of which, we must consider either the Plenitude of Vessels, or the Impurity of the Humours themselves.

1. *The Plenitude of Vessels*, otherwise called *Plethora*, when it happens, causeth an Extravasation of Blood, either by rupture or Apertion of them: either of which, if they fall inwardly upon the Brain or some noble Part, are of great danger; as in *Apoplexia*, &c.

2. *Impurity* or *Cacochymia*, (to which some will also reduce *Plethora*) is a Degeneration of the Humours into a preternatural state, from which Degeneration a multitude of Diseases do arise.

by Conge-
stion:

2. *Congestion* is then said to be the Cause of a Tumour, when the growth of it is slow and without pain, it commonly owing its original to a fault of Concoction in the Part, or at least a weakness in the expulsive faculty; sometimes also to the want of heat, and the density of the skin, which hinders perspiration. These Tumours are generally cold, whereas those made by Fluxion are most frequently hot. The Matter of these is either thin and serous, or thick and phlegmatick, or apt to coagulate and grow hard, as many scirrhus Tumours and *Exostoses*; or made up of nutritious juices, as *Sarcoma*, *Hernia carnosae*, &c.

Wind.

Secondly, As Humour, so *Wind* begetteth Tumours: which though it seldom appeareth alone, but usually mixed with some Humour, which is the cause of it; yet getting predominancy, it denominateth Tumours, and is called *Emphysema*.

Interposi-
tion of a
solid Bo-
dy.

Thirdly, *The Interposition of a solid Body*, is frequently the Cause of a Tumour; as in the *Hernia intestinalis*, *zirkalis*, *Exomphalos*.

Now from the variety of these Causes ariseth a great variety of Tumours, which do receive their several denominations from them.

I shall not trouble you with all the several divisions and enumerations, which, according to *Sennertus's* Arithmetick, make 226 in all: But I shall briefly

briefly instance in these following Heads, to which the rest may without difficulty be reduced.

1. The Blood it self is the matter of many Tumours; and that two several ways.

(1.) When the *serum* is so extravasated as to carry something of the red or grumous part with it into the Tumour. In which case we find the *Inflammation* or *Phlegmon*, and the consequences of that, viz. *Gangræna*, or *Sphacelus*, of which we have treated elsewhere: also *Erysipelas*, *Furunculus*, *Epimyctis*, *Teremithus*, *Phyma*, *Phygethlon*, *Bubo*, *Parotis*, *Carbunculus*, *Paronychia*, *Pernio*, and *Pterygion*.

(2.) When the whole mass of Blood is so driven into a Tumour, as that the *grumous* is either principally concerned, or at least equally mixed with the *serum*. Examples of this are *Varix*, *Ecchymosis*, *Aneurisma*.

2. From Cholera proceedeth *Herpes*.

3. From Phlegm, *Oedema*.

4. From Melancholy, *Scirrhus*.

5. From *Atra bilis*, *Cancer*, &c.

6. From waterish Humours, *Hernia aquosa*, *Hydrops*, *Hydrocephalus*.

7. From salt Humours, *Scabies*, *Lepa*, &c.

8. From Wind, *Emphysema*.

9. From interposition of a solid body, *Hernia*.

I have thus cursorily given you a summary view of the chief Heads of Discourse which are usually handled by our Chirurgical Writers, as a Preparatory to what I myself have to say. And first we shall treat of Humoral Tumours in general, descending from thence to as many of the Particulars as will be necessary for the Instruction of the young Artist.

CHAP. II.

Of Humoral Tumours in general.

THE Causes of these Tumours have been sufficiently handled in the First Chapter, where we have discoursed how Tumours from Humours are produced: I shall here discourse the *Diagnostick*, *Prognostick*, and *Cure*.

If a Humoral Tumour be made by any external Cause, as by a Wound, Sign, Bruise, &c. it is easily discerned: but if there were no such preceding Cause, you may conclude that it ariseth from within. In this latter case you may judge whether a Tumour be made by Fluxion or Congestion, thus.

That which is made by *Congestion* riseth gradually, and is collected into a Tumour compact Tumour without any preceding cause or sign of Fluxion, and is made with little pain, unless it begin in the Joints, or parts of exquisite Sense. And then also in little Children the Tumour is sometimes made before it is discovered, and supposed a luxation of that Joint, the Skin retaining its natural colour: yet as the Tumour encreaseth, the Veins are frequently swelled in the surface of it; and as the Matter makes its way outward, it sometimes inflames and becomes painful.

If the Tumour be made by *Fluxion*, the Part is affected with pain, and swelleth suddenly, and is accompanied with Tension, Pulsation, and Fever.

Now when the Tumour appears either before or with the Fever, no other Disease having preceded it; this is to be called *Fluxion* in the strictest sense of the word. But there are two other sorts of Tumours reducible to Fluxion, and those are made by, 1. Translation, 2. Attraction.

Tumours
by Tran-
slation.

First, The *Translation* of an Humour, in the sense I here mean it, is that sort of Fluxion which happens from within upon the Crisis of some foregoing Disease; which though it be really Fluxion, yet it differs from that which is strictly so called by these circumstances. 1. In Translation, another Disease preceded; in this, none at all. In Fluxion, strictly so called, the Skin is first affected, and, by degrees, the neighbouring Parts; in Translation, it is affected last, the Matter working it self from within outwards, insomuch that you may find Matter in the Tumour before the Skin is much changed. 3. In Translation, there is often a real Extravasation of the *serum* of the Blood between the Interstices of the Muscles, which falleth from some higher place; nay, *Pus* it self may be bred above in some inward Cavity, and fall down thither actually formed before the Tumour begins: which is quite otherwise in Fluxion strictly so called.

Tumours
by Attra-
ction.

Secondly, The other sort of Tumours reducible to Fluxion are those that are made by *Attraction*: which if they do happen, some of the visible Causes mention'd Chap. 1. did precede.

Times of
Tumours
made by
Fluxion.

Tumours made by Fluxion have their several degrees and times, as their Beginning, Augment, State and Declination. Their Beginning is with the extension of the Part affected: the Encrease, when it riseth into a conspicuous Tumour, and is then accompanied with Symptoms encreasing accordingly: the State, is, when the Tumour is made, and the Symptoms at the highest: the Declination, is, when the Tumour becomes less, and the Symptoms abate.

Prognos-
ticks.

The *Prognosticks* of Tumours in general, are taken from the Part affected, as it is of more excellence and use; also as it is internal, or external. By how much the more noble the Part is, by so much the more dangerous. The Internal more dangerous than External. *Prognosticks* are also taken from the greatness of the Tumour, and Accidents that attend it; and from the quality of the Humour that raiseth it, whether hot or cold, thick or thin, malign or benign: for according to these circumstances the Cure is more or less difficult.

The manner of its Termination is to be considered: whether by Discussion, *viz.* Insensible Transpiration; or Suppuration, *i.e.* the converting the Humour (which raised the Tumour) into Matter; or by Corruption, when the Part affected is overcome by the ill quality of the Matter, and putrefies; or by Induration, when the Tumour is hardened, and the Symptoms of Pain diminished; or by Retraction, when the Tumour suddenly disappears, going back into the Body.

All Tumours which owe their original to Humours terminate one of these five ways.

Signs of
Discussion.

1. The Signs of *Discussion*, are the Relaxation, Diminution, and ease of the Part, without Suppuration.

Of Suppu-
ration.

2. The Signs of *Suppuration*, are Pain, Pulsation, &c. with Fever, according to Aphor. *Hipp. Dum Pus conficitur, dolores ac febres accidunt.* But the Matter being made, those Accidents cease, and the Tumour riseth in a Cone, and appears whitish: also the Matter fluctuates under your fingers. Yet it frequently happens in crude Tumours, and those that lie deep amongst the Muscles, that Matter is not so easily discover'd.

Of Cor-
ruption.

3. The Signs of *Corruption*, are a livid or blackish colour of the Part affected, together with a sinking of the Tumour.

4. The

4. The Signs of *Induration*, are, Diminution of the Tumour and Pain; Of Induration.
with encrease of Hardness.

5. The Sign of its *Retraction*, is, a sudden disappearing of the Tumour Of Retraction.
without discussion or Suppuration: which, if it be from an inward cause, is
always evil, and there ariseth Fever, (if there were none before) together
with grievous Symptoms from the return of the Matter.

In the *Cure* of Tumours, two things are chiefly to be considered: 1. the *Cure*;
nature of the Part; 2. the nature of Tumour.

I. In the *Part* it self we are to consider, 1. its Temperament, 2. its Confor- Things to be considered in the Part.
mation, 3. Situation, 4. Sense, 5. Use.

1. In *Temperament*, some are hot, as the Muscles; some cold, as the Tendon, Glandules, and other exanguous parts. Some are moderately moist in themselves, and require to be treated with Medicines of the like nature, such as are neither violently drying, nor too much moistening, as the Fleahly parts: others dry in themselves, yet require exiccants; as Bones: others again overwhelmed with perpetual Moisture, by reason of their situation and spongy substance; as the parts about the *Anus*, *Uterus*, *Axilla*, *Inguina*, &c.

2. *Conformation* of the Parts, regards either its outward Figure, or inward Composition: which latter may consist of several other lesser, whether similar or organical; as a Thigh, of Bone, Muscles, Veins, Arteries, Nerves, Membranes, &c. all which are duly to be considered, that so the nature of the Fluxion, the Vessels that feed it, the disadvantages or advantages of the Part, the best way of Revulsion, Discussion, &c. may be the more readily suggested to the fancy. We may also thereby be informed what Cavities or Interstices may be there for the receipt of Humour; and how great the degeneration is from the natural state or figure.

3. *Situation* of the Part is of great importance: which, if it depend too much, must of necessity be raised; otherwise the Fluxion will be encreased. Therefore if it be a Hand or Arm, it must be raised to the Breast; if a Leg, it must be laid on a Bed, Stool, or the like.

4. The *Sensibleness* of Parts is of much moment in the Cure of Tumours: which, if they light upon such as are of over-acute sense, produce exquisite torment, such as require often a more peculiar care of the Chirurgeon than the Tumour it self. Also its neighbourhood to such a place, obligeth us to prevent its reaching to it.

5. The *Use* of a Part, as it is more or less noble, is very much to be attended: whether it be of immediate importance to Life, as the Liver, Brain, Lungs, Heart, &c. or to great and noble uses; whether of sense, as the Eye, Nose, Ear; or of common excretion, as the Bladder, *Anus*; or of generation, as the Testicles, *Uterus*, &c. Of all which Circumstances, great care is to be had, that they may be treated accordingly.

II. Having thus considered the nature of the Part, you are next to attend to the Tumour it self, both as to its Time, and other circumstances. As to its Time, Things to be considered in the Tumour.
if it be already in the State, you have no more to do but to regard the conjunct cause, *viz.* the Matter already lodged there; the due removal of which, sufficiently disposeth it to Cure: but if it be only beginning, then the antecedent causes are to be likewise considered, and to be removed out of hand; the Fluxion to be checked by evacuation of the Humour, by bleeding and purging, or by revulsion, derivation, interception, repulsion, discussion, &c.

These several intentions will best be judged of, by viewing the quality of the Tumour. If it be hot, and made by Fluxion, then it is to be treated by the aforesaid Method. If it be cold, and made by Congestion, then purging only with resolvents, discutients, and strengtheners of the Part, are to be made use of.

of. Where the Tumours are mixed, the intentions of Cure ought to be so too. Where Attraction is the cause of Tumour, the Cause of the Attraction ought to be removed; whether it be too much Heat, Drawing Medicines, Blistering-Plaisters, or the like. All which things, as they will be sufficiently handled in the Particulars when we come to them; so it will be much for the advantage of the young Artist, if we do here say something of them in general.

Now since Tumours caused by Fluxion are like to employ the former part of this Treatise, I shall begin with those, and consider them in their several estates, of Beginning, Encrease, State, and Declination.

Bleeding. In the Beginning I have already told you of *Bleeding*, which potently checketh Fluxion, and ought to be proportioned to the greatness and violence of the Disease. In tender bodies and small Tumours the evacuation needs not be much: but if otherwise the Fluxion be great, and the body strong, we must take away large quantities.

Purging. Besides Bleeding, evacuation by Stool will be requisite: and indeed, immediately before or after Bleeding, a Clyster or some other Lenitive ought to be exhibited. Nor is that to be rested in, but further purging, either by milder or stronger medicines, to be attempted suitably to the condition of the Patient. It is true, that in hot Tumours there may seem to be only a *Plethora*, which notwithstanding will require evacuation by purging as well as bleeding; it being seldom found that a Tumour is caused by a meer *Plethora* without *Cacochymia*; which *Cacochymia*, if it doth not precede the Tumour, certainly accompanieth it, (as will be made more manifest when we come to treat of particular Heads) and therefore requires the method now mentioned.

Lenitive Purges are *Sena*, *Rhubarb*, *Cassia*, *Tamarinds*, *Manna*, with *Cremor Tartar*. *Electuar. lenitiv.* *Diaprun. lenitiv.* *Diacass. cum Manna*, *syr. rosar. solut. syr. de Rhubarb.* &c. which is as high as we ought to go, if the Humour be hot. In cold ones stronger Catharticks are advisable: of which more anon.

These two are premised in regard of the antecedent cause: but that is not enough, unless the conjunct cause be also removed; which, being the very matter of the Tumour, admits of several intentions. They are reducible to these two Heads.

1. Translation to some other Part in the Body: which is performed by, 1. Revulsion, 2. Derivation, 3. Repulsion.

2. Evacuation out of it: and that is obtained by, 1. Discussion, 2. Suppuration, 3. the discharge of the matter by Apertion.

Revulsion. *Translation*, and, 1. by *Revulsion*, is chiefly intended for the defence of some noble Part which is endangered by the Tumour, or else for the lessening of the Matter when it is excessive. This intention regards as well the antecedent cause as the conjunct. The antecedent, when by Venæsection, Cupping-glasses, Leeches, &c. the whole mass of Humours is diminish'd: of which already. The conjunct, when the Tumour it self is lessened, or quite taken off, by translating it either into the mass of Blood, or into some or other remote Part.

The former of which is often very innocently done in the beginning of a Tumour, whilst the *serum* is yet only extravasated, and not otherwise altered in its quality; so that being re-mixed with the mass, it is capable of Concoction, and consistent with the health of the Patient. The latter is, when by Cupping, Blistering, Ligatures, Frictions, or the like, we raise a Tumour in the contrary Part, and give Nature occasion of discharging the Matter in a place far distant; which otherwise she would have lodged here: in doing of which, she often sucketh in the Humour again which she had before separated into the former place.

2. Deriva-

2. *Derivation* differs from *Revulsion* only in the measure of the distance, ^{Derivation.} and the force of the Medicines used. If we draw it to some very remote, or, it may be, contrary Part, we call that *Revulsion*: if only to some neighbouring place, and by gentle means, we call it *Derivation*.

3. To the making of either of these effectual, *Repulsion* is also necessary, ^{Repulsion.} For Humour that is already impacted, will not so easily be drawn out by former Remedies, if something be not applied to the Part to drive it back.

These Medicines are all astringent more or less. The milder sort of them, which are the most usual in all hot Inflammations, as Lettice, Purslane, Navel-wort, Plantane, Bramble-tops, red Roses, Knot-grass, Horse-tail, House-leek, and, where the pain is more vehement, Poppy, Mandrakes; these may be applied liquid, or in the forms of Liniments, Cerots, Cataplasms, or Emplasters: of which this Book will give you Examples. The more astringent are Pomgranate-rinds and flowers, Medlars, Quinces, Sloes, Acorns, Cypress-nuts, Mulberries, Sumach, Bole-armoniack, *sanguis draconis*, Vinegar, red Wine, &c. Compounds of both sorts are, *Ol. omphacin. ol. rosar. unguent. rosar. popul. album, unguent. nutrit. cerat. refrigerans Galeni. Empl. è bolo, de minio camphorat. oxycratum, oxyrrhodinum, oxelæum. R. succi solani, plantag. semperivivi, an. ʒij. acceti optimi ʒiss. mucilag. sem. psyllii. cydon. extract. cum aq. rosar. an. ʒj. Misc.* in which you may dip cloths, and apply them to the Parts affected, renewing them often; or you may add to it *pluv. gland. flor. ros. rub. balauft. an. ʒij. Bol. armen. ʒiij. olei myrtillor. unguent. rosati, an. q. s. fiat mixtura.* Apply it in the form of an Emplaster over and about the diseased Part.

Concerning these foregoing Medicaments, it is to be cautiously observed, ^{Cautions.}

1. That they are proper only in the beginning of the Tumour, whilst you intend to prevent it by driving it quite back into the Blood again. For if the Humour be so impacted as not to be repellable, but that it must have its evacuation in the place by Suppuration, then if by bleeding you hinder concoction of the Matter, you prolong the Disease; Nature in that case wants all its heat and all its *serum*. Much more do you hurt it if you use Repellents, which, being commonly cold and astringent, do close up the Pores, and keep out both the natural heat and the *serum* of the blood, the affluence of which and its mixing with the Humour is necessary to the dilution and the digestion of it; so that both being hindred, the Part will grow livid and mortifie.

2. Caution is to be used in the application of these Medicines where the Tumour is malign, or the Crisis of a Malignant-Fever: for in all such cases, the Retraction into the Blood is of very dangerous consequence: wherefore we then rather use Cupping-glasses and other Attractions to draw it out.

3. It is to be noted, that these Repellents are often applied above the Tumour as defensatives or intercipients: in which case they have regard to the antecedent cause, and, in a strict Discourse, should have been handled under that Head; but I rather accommodate my self to the method of Operation.

Evacuation is necessary for the discharge of that Matter out of the Body by some more immediate way, which either cannot, or ought not, by the former intentions be driven back. Now that is of three sorts.

1. Insensible, by *Discussion* or Resolution; which is nothing else but a breath- ^{Discussion.} ing out the Humour by insensible transpiration. Therefore the Humour so to be discharged ought to be thin, and the Skin lax and rare: for if it be otherwise, or lie deep amongst the Muscles, it will not easily yield to Transpiration. The Medicaments called *Discutients* ought to be hot and of a subtil quality, powerfully penetrating: which quality renders them improper to be applied

plied in the beginning of Inflammations ; (for thereby the Part would be too much heated, and consequently the Tumour made great ;) but they are proper being mixed with Repellents in the beginning of the Augment, when the Tumour is hard, and not fit to be treated longer with Repellents alone.

Discuti-
ents and
Emolli-
ents.

These Medicaments are to be proportion'd as the Matter and Conformation of the Part requireth. The milder are emollient and rarifying, proper in soft bodies where there is Inflammation with hardness : and they are *Radices* & *folia althææ, malvæ, violar. sem. lini, fœnug. flor. chamæmel. meliloti, sambuci, far. hordei, lentium, orobi, lupinor.* which may be made up in Cataplasms with some of these following, which are of the same quality, viz. salad oil, butter, *axung. porcin. anseris, anatis, gallinæ, sebum ovinum, vitulinum, vaccinum.* The more recent these Fats are, the more emollient ; and the more rancid, the more discutient. *Mel* and *cera* are reckoned amongst the Discutients : also *ol. cham. lumbricorum, sambuci, lini, irinum, &c.* *Empl. diachyl. simpl. cum gummi, ireatum, de mucilag. de meliloto, &c.* The milder Discutients mixed with Repellents may be thus made : *R. fol. & rad. althææ M. j. flor. cham. M. ss. flor. ros. rub. nymphææ, an. P. j. sem. cydonior. 3 j. far. fabar. orobi, an. 3 iij. ss. coq. in sero lactis, & fiat cataplasma S. A. addendo in fine coctionis ol. ros. & cham. an. q. s.* Or, *R. fol. malvar. parietariæ, plantag. an. M. j. sem. lini, fœnug. an. 3 j. summitat. absinthii, florum sambuci, an. M. ss. flor. ros. rub. M. j. coq. in s. q. vin. tenuis ; addendo farinæ hordei 3 iv. & ol. olivar. immatur. q. s. fiat Catapl. S. A.* As the Humour discusseth, you may foment it with a Decoction of *summitat. absinth. flor. cham. ros. rub. balaust. bacc. myrtil. or the like,* in wine and water, by which you may dry up the remaining Matter, and strengthen the relaxed Part.

In Tumours where the Matter lieth deeper, *R. rad. althææ, ebuli, irid. recent. an. 3 ij. rad. bryoniæ, cucum. agrest. an. 3 jss. flor. cham. meliloti, summitat. anethi, an. M. j. sem. lini, fœnug. an. 3 j. fiat Catapl. S. A. addendo axung. anseris, anatis, an. 3 j. mell. com. 3 ij.*

These following are yet more attenuating, and proper in crude Tumours : *summitates origani, thymi, calaminth. pulegii, rorismarini, hyperici, centaur. min. bacc. lauri, juniperi, sem. cymini, rutæ, &c.* *Gum. galbanum, ammoniac. bdellium, opopanax ;* also *sulphur. viv. alumen, calx lota, sal nitri, cineres ligni quercini, sarmentor. vitis, brassicæ.* The Compounds are, *Ol. scorpion. nardin. euphorbium, petroleum, oleum philosophor. unguent. aregon. martiat. Empl. de raris cum & sine Mercurio, Empl. diasulphuris, de baccis lauri, cicutæ cum ammoniaco, &c.* The Matter may also be disposed for resolution by such like Fomentation : *R. rad. enulæ campanæ, bryoniæ, an. 3 ij. summitat. pulegii, origani, scabiosa, abrotoni, an. M. j. bacc. lauri, juniperi, an. 3 j. sem. cymini, 3 ss. coq. in aq. font. & vin. alb. an. 3 ij. colat. adde aceti vin. 3 ij. salis nitri 3 j. Misce. R. salis nitri, ciner. sarmentor. an. 3 j. ol. vet. 3 vi. cera iij. terebinth. clara 3 j. fiat Cerat.* If the Matter be so gross and viscid as it yields not to the Remedies above prescribed, it may be reasonable to attempt it by Suffumigation with vinegar sprinkled upon the *lap. pyritis*, which sometimes disposeth them well to Discussion. But in the use of these stronger Discutients you are to be careful, that whilst you endeavour Resolution, you do not breath out the thin Humour, and fix the more gross, and so render the Part schirrous.

Caution.

Suppuration.

2. If after the use of the milder Discutients proposed in hot Tumours, the Symptoms of Pain and Inflammation do not lessen, you shall then forbear the further use of Discutients, and hasten concoction of Suppuration ; which is indeed the work of Nature, by the benefit of whose Heat the Humours are digested, and Pus generated. If the heat be strong, the Matter is for the most part well concocted ; and being so, it is white and of good consistence, and not

not ill-scented : but if the Heat be weak, the Matter is otherwise. It is therefore our work to cherish and encrease the native heat in the affected Part, to perfect its Concoction : and that is furthered by hindering Transpiration, and defending it from outward air ; also by proportioning the quality of the Medicaments to the temper of the Part, and quality of the Tumour. And forasmuch as our natural Heat is temperate and moist, such also ought the Medicaments to be : they ought also to be Emplastick. Yet it is not unfrequent to see a Suppuration made accidentally by cold Medicaments, which by a light, gentle striction of the Pores, do perform the office of Emplasticks ; as *Unguentum album*, Sorrel roasted in embers. Nay, in cold Tumours I have seen Suppuration caused by the stronger Discutients.

Tumours do suppurate sooner or later, according to the Humour of which, or the Place in which they are generated. Those which are of Blood, and in fleshy Parts, do easiest come to maturity. Those which arise from other Humours, and are near or in the Joints, or Parts endued with little heat, (especially those contained in a *Cystis*) do difficultly suppurate.

The Matter differeth according to the variety and mixture of the Humours. Of Blood always proceeds laudable Matter, especially if the native Heat be strong : but if other Humours be mixed with it, as they get predominancy, so is the Matter more or less crude. In Furuncles or Boils it is clammy, and not unlike Pith.

In Abscesses made by Translation, the Matter is purulent, sometimes white and well-coloured, other times partaking of a yellow or green, sometimes of a brown colour ; and is more or less foetid, according to the time it hath there remained.

Tumours made by Translation, have sometimes Matter in them from their first appearance : but it being commonly lodged deep under the Muscles, the Matter is not felt till it hath raised the Tumour ; which is not done without pain, pulsation, &c. as in a *Phlegmon*, but deeper, and doth not affect the Skin with Inflammation till the Matter reach near it. In these Tumours we do not attend the Symptoms of Suppuration, but open them as soon as any quantity of Matter offers it self. Whilst the Matter is making, the native Heat of the Part is to be preserved and encreased by Medicaments which may alleviate the pain, and further concoction.

Suppuratives are of two sorts : some are simple, others are compound. The simple are *Aqua tepida*, with which if you foment the lesser *Phlegmons*, it will suppurate, (and sometimes, by continuing its use, it will discuss them, where the Matter is not fit for suppuration.) *Hydrelaum* moderately heats and digests. *Oleum maturum* cherishes the native Heat, and supplies and concocts Matter. Butter is maturative, and is profitably mixed with Anodynes and Suppuratives, especially in soft delicate bodies. *Oesypum* is also maturative ; and so are the Fats of all domestick Creatures. *Fol. malvæ, viol. parietariæ, mercurialis, brancæ ursinæ*, decocted in *Hydrelæo cum farina tritici, butyro, & vitellis ovorum*, are Suppuratives. A raw Onion is sharp and biting ; but roasted under embers, loseth its acrimony, and suppurates Tumours that are difficult to digest. The Lily-root is a known Suppurative. Out of these Simples Cataplasms are made ; as, *℞ radic. althææ, lilior. albor. an. ℥ij. fol. ruffilag. malvæ, bismalvæ, an. M. j. coq. in brodio, terantur, adjectis far. sem. lini ℥j. far. tritici ℥ij. axung. porcina, butyri rec. an. ℥iiss. croci pulv. ℥ij. vitello ovi unius ; Misc. fiat Cataplasma*. In cold Tumours, or where the Matter lies deep, *℞ radic. brioniæ, Lapathi acuti, an. ℥ij. coc. & cribrentur per setaceum, addendo cappar. & allior. sub cineribus coctorum an. ℥iij. fermenti acris ℥ij. pulv. sem. lini & sanug. an. ℥j. tritici ℥ij. axung. porcinae ℥ij. mell. com.*

axung. anseris ʒj. croc. pulv. ʒj. Misc. Where the Matter is tough, *gum. galban. ammoniac. bdell. Empl. de mucilagibus, &c.* The Tumour being suppurated, be the Matter what it will, the evacuation of it is necessary, lest it corrupt within, and corrode the Veins, Arteries, Nerves, Tendons, or the Bone, if it lie near one: in which cases it is lawful to open it before the Tumour is all suppurated. So also in the Joints, and in the Head, if the Abscess lie over the Sutures: likewise in Abscesses in *Ano*, where, through the weakness of the Part, a putrefaction is apt to follow; or in the *Fauces*, where the neighbouring parts may suffer by consent, and the Patient be in hazard of strangling. In these cases we wait not for perfect Suppuration, but by deep Scarification discharge the serous Blood, and prevent an Abscess. There is also care to be taken in Abscesses of the Breast and Belly, where the Matter is in danger of breaking inwards. Yet by opening these too soon, they sometimes apostemate again, or become crude, and difficult to digest and cure.

Two ways
of Open-
ing.

3. The way of *Opening* them is two-fold; by Knife, or Caustick.

Incision.

They are of use according to the place that is affected, and the quantity of Matter which is to be discharged. In the Face, where the *Cicatrix* may be unseemly, *Incision* of them is best: but in large Abscesses, where the quantity of Matter is great, or where we would keep the Abscess long open, or in a place where Bandage cannot be made to retain the Tent in, there a *Caustick* is most proper. Authors do not generally approve so well of the Caustick; yet *Sennertus* proposeth it in a *Hernia aquosa*, where it is least safe: for in truth, those cold Tumours do especially require to be opened by Incision; yet when the habit of Body hath been tolerable, I have in that also used the Caustick with good success, as I shall shew in the Cure thereof, and do commend it in the opening of large Abscesses as most safe and easie, the Matter being thereby discharged plentifully. And if the Caustick be applied in the declining part, the Abscess is sometimes near cured before the Escar separates, (if the Matter be not contained in some peculiar *Cystis*) and that without Dilatation or Tents. Yet you ought to be wary how you make Fontinels with them in hydropick or very fat People, by reason of the weakness of their natural heat.

Caution.

Causticks.

Of *Causticks* there are various sorts; as of the *lixivium saponis, cineram sament. vitis, siliquarum fabar. &c.* boil'd to a solid consistence: or in the boiling you may add to them *vitriolum Roman. pulver.* from ʒj. to ʒij. also *opium ʒj.* to ʒvi. of the *lixivium*: or by a mixture of *calx viva* & *lixiv. saponis* you may make a Caustick. These are the stronger sorts in use amongst us: not but that there are Causticks made with *Arlenick, &c.* but, unless it be in great *Sarcomata*, or such-like, I use only a mild preparation of *calx viva* with a little common Soap, and a third-part of the Caustick-stone. In Children and tender soft bodies I often use *calx viva* made into paste with a little black-soap. In these two latter there is no fear of their spreading; a Pledgit of dry Lint, and an Emplast. *diachalciteos*, or the like, is sufficient defence, leaving them on till the next morning. But in the application of the stronger Caustick there is more caution required. Those we endeavour to keep within compass by small snips of Emplast. hoping thereby to defend the Parts about: but, in spite of all our endeavours, they will spread farther than was designed, if they lie any while on the Part out of our sight. For though the Part be outwardly defended with Emplast. they will find away under the skin, or at least under the *cuticula*, to spread, according to the quantity of the liquid-salt in the Caustick. They do your work in less than an hour.

Caution.

The Escar being made, you may divide it, and stupe the Part affected with Wine or Milk, and dress it up with *unguent. basilicon* dipt in *ol. lilior.* warm, applying

applying an *Empl. diachalc. simpl.* dissolved in some of the same oil to the consistence of a Cerat : or apply an anodine Cataplasim, and bind it up.

In the opening an Apostem by Incision, you ought to take care that the Apertion be made in that place where the Matter is most contained, the skin being for the most part thinnest there : and if it be not the most declining part, yet you may draw your knife towards it, for the more easie discharge of the Matter, then that the incision be made according to the rectitude of the Fibres. If it be in the Groin or Arm-pit, it ought to be oblique : in other Parts make it according to the length of the Member.

In making the Incision, you are to avoid wounding the Vein, Artery, or Nerve : nor must you discharge the Matter at once, especially in great Abscesses, least you over-weaken the heat of the Part, or cause fainting.

The Instruments proper in opening Apostemations are made choice of according to the Part that is affected, and the greatness of the Abscess. *Ambro. Parey* proposeth some whereby you may more covertly open them : but we make use of Lancet or Knife, of which our Instrument-makers furnish us with choice. If the *Fauces* be affected, the Handle of your Knife ought to be long, and the Blade short ; some thereof crooked, and cutting on one or both sides. Your Instruments ought to be kept clean, for your credit ; and sharp, that you may perform the work with less pain.

The Incision being made, the Accidents or Symptoms that attend it are to be removed. In the first place, the Bleeding is to be restrained, if any such happen, (which is very rare) with *pulv. Galeni ex thure & aloe mixed cum albumine ovi.* How you shall dress it if opened by Caustick, I have already shewed you.

Fainting which sometimes happeneth through weakness or timorousness in the Patient, may be relieved by laying the Patient upon his back, and sprinkling a little cold water on his face. But if the Fainting proceeded from some preceding sickness, and is continued by the greatness of the evacuation and noisom corrupt Matter, you shall in such cases provide some Cordial-Juleps or Electuaries, of which he may take at pleasure. As, *R. Spec. diamarg. frig. ʒss. confect. alcherm. ʒj. syr. è succo citr. Rhoad. an. ʒij. aq. melissæ buglossæ, cinnam. hordeat. an. ʒiss. Mis.* Or, *R. Confect. de hyacintho ʒss. syr. garyophyll. rubi Idæi, an. ʒij. aq. draconitii, card. benedict. Stephani, an. ʒiss.* Or, *R. Conf. borrag. melissæ, cort. citr. cond. ros. rub. an. ʒj. rad. eryng. conditæ, nucis moscat. conditæ, an. ʒiss. spec. aromat. rosat. ʒij. confect. alcherm. ʒij. ol. cinnam. gut. iv. cum syrupo de cort. citr. q. s. fiat Electuarium.* Of which the Patient may take a morsel any hour in the day. Mithridate and *theriaca Veneta* are proper in such cases alone, or mixed with *cons. lujulæ*, or any of the fore-mention'd Syrups or Conserves.

The spirits may also be refreshed with *Epithemata* made up of some of the aforesaid distill'd Waters and Cordial Species with *acet. ros. &c.* which, for want of a Physician, you may prescribe.

You are, in the next place, to consider the Abscess, whether after the evacuation of Matter there remain any considerable hardness, either by reason that the Tumour was not enough suppurated, as in large Abscesses it frequently happens ; or that it be affected with pain and inflammation. Therefore at your next dressing it may be reasonable that you have a Fomentation ready of *summitat. malvæ, bismalvæ, flor. cham. summitat. absinth.* out of which a Stupe may be wrung, and applied over the Abscess, to give a breathing to it, and you leisure to consider how to dress it.

If it was opened by incision, it requires Digestion ; to which purpose this may be proper ; *R. Terebinth. ʒj. sar. triticæ ʒij, croci pulv. ʒj. vitel. ovi q. s.*

Misce. But if the lips of the Ulcer be painful, a little of the Yolk of a New-laid Egg with *ol. ros.* upon a proportionable Tent may be sufficient, and an *Empl. of diachyl. simpl.* with a mixture of *unguent. dialthææ* applied in the form of a Cerat : Or, in case of pain or hardness, this; *R mucil. sem. lini, sænug. althææ extract. in decoct. bordei ʒij. olei lilior. æsyp. amygd. dulc. an. ʒjss. terebinth. ʒj. cera ʒvj. aut q. s. fiat Ceratum.* Then with Compresses and Bandage rowl it moderately ; and after it is digested, you may Deterge, as shall be presently shewed.

Fomenta-
tion.

In Tumours by Congestion, foment with *decoct. absinth. flor. sambuci, ros. rub. baccar. myrtil. sem. sænug.* in Wine and Water, adding afterwards some *sp. vini.* These Abscesses requiring to have their heat kept up, and the relaxed Parts strengthened. If the Opening was made by Caustick, dress it with a Pledget dipt in a mixture of *unguent. basil.* with *ol. lilior.* hot : Or, to rouse up the heat in the Part, and hasten separation of the Eschar, add a few drops of *ol. terebinth.* and apply *Empl. diachyl. iræat.* or *Empl. de minio cum sapone,* malaxed with *ol. lini.* After separation of the Eschar, you may deterge with *mundif. Paracelsi* thus made: *R terebinth. claræ, mellis dispumati, an. ʒjss. vitel. ovor. num. iij. coq. ad consist. unguenti.* If there be required stronger Deterfion, you may add *Merc. præcip. ʒj.* to an ounce ; you may also add *alumen ust.* but that will make the Ulcer painful ; however, some crude Ulcers may admit of it. *Mundif. ex apio* is also proper, as it is in the *Pharmacopœia Lond.* or this: *R suc. absinth. ʒij. succ. brassicæ, chelidon. an. ʒj. mellis rosati colati ʒij. terebinth. ʒiij. coq. ad succorum consumptionem, addendo pulv. myrrhæ, sarcocollæ, an. ʒjss. pulv. rad. ireos ʒj. rad. aristoloch. rot. pulv. ʒij. far. tritici ʒiij. far. orobi, lupin. an. ʒj. Misce.* If the Matter do not well discharge, you must help it by Compression and Bandage : or if the Tumour was large, and the Opening but small or not enough in the declining part, lay it more open ; for without a convenient Orifice, whereby the Matter may plentifully discharge between Dressings, you cannot hope for a speedy Cure. That way of Dilating by Piths or Sponges is meer trifling, unless it be to thin the Skin, for the more easie Incision.

Mundif.
Paracels.

Mundif.
Apii.

Unguen-
tum incar-
nativum.

Unguen-
tum Nico-
tiane.

If you Deterge not with too sharp Medicaments, they may also serve to Incarn : or you may use this, or such like ; *R terebinth. Venet. ʒiij. pulv. aristoloch. rot. ireos, thuris, an. ʒiij. mastick. myrrhæ, aloes, an. ʒss. cadmiæ ʒvj. mell. ros. q. s. fiat Unguentum.* Or, *R succ. Nicotiane ʒij. picis resinæ, ol. olivar. immatur. an. ʒiij. terebinth. Venet. ʒvj. cera q. s. fiat Unguentum.* If the flesh grow loose or spongy, touch it with a Vitriol or Alumè-stone moderately, and it will daily waste it, with little or no pain, and dispose the Ulcer to cicatrize : of which Stones you may have some fitted in Quills for your use.

Unguen-
tum lithar-
gyri.

The Ulcer being Incarned, you may Cicatrize with *unguent. lithargyri* : *R lithargyr. aur. & argent. an. ʒiijss. calcis decies lotæ subtilis, pulverizatæ ʒij. cerussæ ʒij. tutiæ ʒvj. olei myrtillor. ʒvj. ol. rosati ʒjss. sevi vitulini ʒviij. succor. plantag. lectucæ, solani, an. ʒiv. coq. seivum lento igne, cum oleis & succis usque ad consumptionem succor. deinde colentur ; colaturæ addantur unguenti rosati ʒij. ceræ albæ q. s. iterum coq. unicâ ebullitione ; postea auferatur ab igne, baculo agitanda, cum mineralibus prædictis prius optimè pulverizatis, & fiat unguentum.* Or with *unguent. desiccat. rub. ac calcis.* Or else you may Cicatrize with this Water ; *R myrobalan. citr. balaust. an. ʒij. alum. rup. ʒss. aq. germin. querc. equiseti, an. ʒij. vini albi ʒj. bulliant parum, & colentur pro usu :* in which Pledgits may be dipp'd and press'd out. You must take care that the Ulcer be Cicatrized seemly, neither too high nor too low.

Aqua cicat-
rizans.

Having thus treated of Tumours by Fluxion, we shall now say something of those made by Congestion ; which, though capable of most of the former

mer intentions more or less, yet differ in the manner of governing them, viz.

Bleeding ought in this case to be less frequent; but Purging more strong, with *agarick, hermodactyles, scammony, jalap. aloes, colocynth. pil. Rudit, coctivæ, Cornachini, benedict. laxat. confect. hamech. elect. è sacco rosarum*, Purging Diet-drinks, &c. as in the Chapter of Oedema, to which I refer you. The Revulsion hath little or no place here.

Derivation by Issues and Setons are usual. Repulsion is proper in many of them, especially that of Bandage in oedematous Swellings of the Legs, Arms and Hands.

But Discussion is the principal intention of the Chirurgeon in this place, and ought to be done with hot Medicines: of which sort I have set you down some already, and more you will meet with in our particular Discourse of those Tumours.

Suppuration seldom happeneth in these Tumours, unless there be an admixture of Blood with it: in which case treat them with Suppuratives, as hath been said, and open them.

After Apertion, the method of healing differs little from that of Abscesses made by Fluxion: but of their Cure you shall be more informed in the Chapter of Oedema.

The next thing that offers it self to our consideration is *Diet*: and that is of two sorts; the one regarding Tumours made by Fluxion, the other those by Congestion.

In hot Tumours made by Fluxion, we are to propose such moderation as may take off from the great ferment in the Blood, whereby it may be rendered less apt to flow into the weak Part. To which purpose, the Ancients prescribed such a slender Diet as might only support their Strength: yet with a regard to Custom, the Age and Constitution of the Patient, and greatness of the Inflammation. If the Body be strong and abound with Humours, and the Inflammation great, their Diet may be the more sparing and cooling; as Water-gruel, Panado, and such like. Where the Inflammation is less, or the Patient weak, Chicken-broth, with Wood-sorrel, Lettice, Purslane, or a boil'd Chicken, a potched Egg, &c. and such-like Meats of easie digestion. To others, Mutton, Veal, Pullet, Rabbit, and some sorts of the firmest Fish. In great Inflammations there is commonly a Fever attending, in which case they have little inclination to eat. Their Drink should be Ptisans, or a small well-boil'd Ale. If Wine be allowed, it ought to be small, or allay'd with Water. *Fallopious*, in his Discourse of Hot Tumours, saith, he was wont where there was *Plethora*, to prescribe *panem lotum in aqua, asperso succo aurantiorum cum modico zaccari*, a little Bread dipt in Water, and sprinkled with juice of an Orange and Sugar, and that but twice the day; and their Drink no better than Water. *Galen* forbids Wine; yet permits it to them, *qui habent ventriculum debilem*, for their Stomach's sake: which is necessary to be observed; for unless that be kept up, in vain are all our Endeavours.

The Air ought to be temperate by Art or Nature.

All Exercise is to be forborn; for the Blood is thereby heated, and the Humours made more fluid. Sleeping in the day is also forbidden, out of hopes they may rest better in the night.

In Tumours by Congestion, we allow such a Diet as is heating and attenuating; their Meat rather roasted than boiled, and of good nourishment, as Mutton, Veal, Kid, Pullet, Rabbit, Chicken, Pheasant, Partridge, Cock, Snipe, &c. All White-meats, Fish, Fruits, Salads, are forbidden. Their Drink may be Ale or Beer: Wine is also allowed in these cases: and their Drink may

may be medicated with *Sarsaparilla*, *China*, *lign. guajaci*, *lentiscinum*; as you may see more particularly hereafter.

The Air ought to be warm and attenuating. Sleep in the day is absolutely forbidden, and ought to be moderated in the night. Passions of the Mind are to be avoided both in this and all other Diseases.

CHAP. III.

Of Inflammation, or Phlegmon.

HITHERTO I have discoursed of Tumours in general. I shall now descend to particulars, and begin with *Phlegmon*, or *Inflammation*; both because it is the first degeneration from good Blood, and in its own nature nearest of kin to it; and also because it is the most frequent of Tumours happening in Diseases, Wounds, Contusions, Fractures, Luxations, &c. It being also the usual fore-runner of many mischiefs that happen in many of those cases, and consequently the most obvious occasion of exercising the Chirurgeon's skill.

Defini-
tion.

I define it, a large Tumour, hot, of a red colour, with pain, pulsation, tension, and a circumscribed hardness.

Differen-
ces.

The *Differences* of it are either from the Situation; inward, or outward: Or from the Part affected, whence it taketh a name. As inwardly in the Lungs, it is called *Peripneumonia*; in the *Pleura*, *Pleuritis*; on the *Diaphragma*, *Paraphrenitis*; in the Brain, *Phrenitis*; in the Throat, *Angina*: outwardly on the Throat, *Angina notha*; in the Eyes, *Ophthalmia*, &c. Or, lastly, from the Matter: which if simple, it is a simple *Phlegmon*; if compound, it hath its denomination from the Humour with which it is compounded, and so is called *Erysipelatodes*, *Phlegmatodes*, *Oedematodes*, *Schirrholes*.

Causes.

The Cause of *Phlegmon* is generally a *Plethora*, having some acrimonious mixture in the *serum* of the Blood; which latter is the usual matter of a *Phlegmon*, being cast out of the vessels, and lodged in the pores of the skin, or other Part affected with it. This *serum* being accompanied by the thinner parts of the Blood, grows red and angry, and, wanting its due regress into the Mass, first gathers into a hard Swelling, and in few days (if it be not dissolved) ripens into Matter, and so dischargeth.

Signs.

The *Signs* of *Phlegmon* are, great pain, heat, inflamed red colour, and swelling, with hardness, pulsation, and tension. The Tumour growing big and more collected, a Suppuration succeeds, and then the Symptoms abate. As the Tumour riseth into a Cone, so the Matter may be felt to fluctuate, and the Skin becomes thin and pale, viz. of the colour of the subjacent Matter.

Prognos-
ticks.

The *Prognostick* is good, when the Tumour insensibly exhales and resolves: in which case the ebullition abates, and the Blood, being less violent in its motion, passeth gently by, and by degrees swalloweth up that Humour into its channels again, which it had in the time of its ebullition cast out; or at least, having suffered the thinner parts to transpire, it receiveth the rest.

Next to this way of terminating a *Phlegmon*, Suppuration is best, when the Matter of the Tumour ripens into a kindly Pus.

But it is of ill consequence if the Tumour disappear without abatement of Accidents, and the Fever still continue. In this case either a Gangrene or
some

some other grievous Symptom succeeds: or, if it were the Crisis of a Fever, that encrease, and the Life of the Patient is in great danger.

It is also ill, when the Matter, instead of resolving, hardens, and the Pain ceaseth. It fore-sheweth a scirrhus Tumour approaching.

Fat People are not so easily cured as lean. Nervous and tendinous Parts have worse Symptoms, and are harder of cure than fleshy ones.

If after great Abscesses the Body be not purged and regulated, they are apt to fall into some other Disease: otherwise they occasion much Health.

The modern Authors have reduced the Cure of these Tumours to four heads: 1. to the manner of living; 2. to the preventing the Influx of Humours; 3. to the evacuating the Humours already inflow'd; 4. the correcting of the Accidents to which they are subject. Cure.

1. The manner of Living, consists in the moderation of the Six *non naturales*. As, that the Diet be slender, cooling and moistening, whereby the encrease of Blood may be moderated, and rendred less apt to flow into the weak Part; from which consideration the Ancients, as I told you, allowed only enough to preserve their Strength, with regard to their Habit of Body, and custom of Living. They generally prescribed Panado's, Barley-gewell, and such-like Spoon-meat: Chicken-broth is the highest whilst the Humour is fermenting; but after Suppuration and discharge of Matter, greater liberty is permitted. Air, Exercise, Watching, Passions of the Mind, &c. are to be regulated; as hath been said in the preceding Chapter of Tumours in general.

2. The second intention is performed by moving the Cause of the Tumour, which is the Plenitude and *Cacochymia*: the former whereof requires Bleeding, the latter Purging. Bleeding is here propos'd as the speedy remedy, both for lessening the Tumour, and appeasing the Pain: and is made by opening a Vein near to the Part affected. According to *Galen*, *Debemus venam secare ad deliquium animi*, we ought to draw Blood to very fainting. Yet we are therein to consider the Constitution and habit of Body, and greatness of the Inflammation. Cupping, Friction, and Deligation of the opposite Parts may be hereto necessary before the Tumour is made.

To take off the *Cacochymia*, Purging with Lenients is proper; as *elect. lenitivum*, *diaprun. lenitivum*, *diacatholicon*, *cassia*, *tamarindi*, *manna*, *cremor tartari*, Infusions of *Senna*, *Rhubarb*, and opening Apozems; as hath been said in the former Chapter. In the next place, it will be proper to prescribe such Draughts as may quiet the motion of the Humours, and temper the heat of them, *viz.* Emulsions of the greater and lesser cold Seeds made with *decoct. hordei*; also *Juleps*, with *syr. de papavere*, *Rhæad. paralyseos*, *violar. è succo citri*, &c. in proper Vehicles.

3. The third intention regards the Part affected more immediately, and is the removing of the conjunct Matter. How that is done by Revulsion, Derivation, &c. I have shewed you in the former Chapter; as also how you are by Repellents to withstand the influx of Humour in the very beginning; and of what quality the Medicaments proper thereto are, and in what cases they are not to be applied, as in malignant Tumours, or those in the Emunctories, &c. I shall here only insert some few Prescriptions that are most peculiar in the several cases, and begin with Repellents in the first place: of which sort is *cerat. Galeni*. *R. ceræ alb. ℥iv. ol. rosati omphac. ℥ij. novies laventur aq. font. deinde acceto subigantur.* Or this; *R. Empl. diachalc. ℥ij. boli armen. ℥ij. bacc. myrtyll. ℥ij. aceti vini cochl. iv. ol. myrtyll. q. s. fiat Ceratum.* Or this; *R. far. hordei ℥vj. cort. granat. pulv. ℥ij. balauft. pulv. ℥ss. succ. sedi maj. ℥ij. vini rub. q. s. coc. ad consist. catapl. & in fine coctionis adde ol. myrtyll. ℥ij.* Either of the

the two latter, if timely applied, will not only resist the Influx, but dry up the inflowed Humour. They must be renewed daily, lest they dry too much, and thereby encrease the Heat in the Part.

In the encrease of Inflammation and Tumour, when it begins to be hard, you are to apply Resolvents with Repellents. *R. fol. malv. parietariæ, plantag. an. M. j. far. hord. & fabar. an. ʒiʒ. flor. ros. rub. pulv. ʒʒ. coq. in aq. font. fiat Catapl. S. A. addendo in fine ova integra num. ij. ol. cham. ros. q. s.*

When the Tumour is more form'd and harder, forbear Repellents, and apply Discutients and Emollients. *R. rad. & fol. althææ an. M. j. sem. lini & sænug. an. ʒvj. flor. cham. meliloti pulv. an. ʒij. far. hord. & tritici an. ʒvj. fiat Catapl. addendo mell. com. ʒij. ol. sambucini & axung. anseris an. ʒj.* If the Tumour decline, *R. fol. parietariæ M. ij. sem. lini, sænug. an. ʒʒ. summitat absinthii, anethi, flor. cham. sambuci pulv. an. ʒiij. flor. ros. rub. ʒʒ. far lentium & fabar. ʒiv. coq. in vino, & fiat Catapl. addendo ol. lumbricorum, anethi, an. ʒij. mellis com. ʒiʒ. R. Empl. de mucilag. Empl. oxycrocei, an ʒij. diachyl. ireat. ʒj. ol. anethi q. s. fiat Ceratum.*

4. The fourth intention is, to remove the Accidents that frequently accompany these Inflammations; amongst which, Pain is the chief: for that not only tireth and exhausteth the Spirits of the Patient, but also encreaseth Fluxion, and destroys the Temperament of the Part. Therefore you ought to have especial regard thereto, and by Anodines appease the Pain. To which purpose I shall offer you this following Cataplasm. *R. fol. visci pomorum cum fructibus an. M. j. fol. hyoscyami M. ij. fol. papaver. M. j. sub cineribus coquantur; addendo tandem mic. panis albi in lacte tepido macerati ʒʒ. vitell. ovi num. ij. pulv. croci ʒj. ol. chamæmeli & rosarum an. q. s. fiat Cataplasma S. A.*

The Fever which attends Pain is removed by Venæsection, or by the resolution or suppuration of the Tumour. If it shall unhappily indurate or gangrene, I refer you to those Chapters of *Scirrhus* and *Gangræna*: yet I think, if the method be rightly observed which hath been proposed, there will need no such reference.

The most safe and speedy way of Curing *Phlegmons*, is by Resolvents. In Wounds, Contusions and Ulcers, Inflammations for the most part go off so: and so would the greatest *Phlegmons*, if the aforesaid method were truly observed. But the neglect of timely Bleeding, and the too hasty application of Pultices of White-bread and Milk, render them incapable of Repellents, and, for the most part, of Discussion: whence followeth a necessity of Suppurating.

The Medicaments that further Suppuration, are suitable in their temper to the heat of the Part, so as to cherish it; and of an emplastick quality, hindering Transpiration. So Oils and Grease, which are scarce permitted in Discutients, (farther than to give good consistence to the Medicine) are here proper. These following are Suppuratives: *R. radic. althææ, lilior. albor. an. ʒiv. branc. ursinæ M. j. coq. in brodio aut lacte ad mollitiem; deinde adde medullæ panis albi ʒʒ. sem. lini pulv. ʒij. axung. porcine gallinacæ an. ʒij. vitel. ovor. num. ij. croci ʒij. Misc. fiat Cataplasma.* Or this: *R. rad. lilior. ʒiij. cepar. coct. sub cineribus ʒij. summitat. althææ M. ij. caricæ pingues tost. num. 6. coq. & contusis adde far. tritic. ʒij. pulv. sem. lini ʒj. axung. porcine ʒij. unguent. basilici simpl. ʒj. ol. lilior. q. s. cum vitel. ovor. & croco: fiat Cataplasma.* Whilst you endeavour Suppuration, you must expose the Tumour as little to the air as may be.

The going off of the Accidents of pain, heat, pulsation, &c. are good signs of Suppuration: but if the Matter lie deep, the Symptoms do not cease till it be discharged; nor is the Suppuration discerned in some of them otherwise than

then by the fluctuation between your hands. In such cases, if you doubt Suppuration, continue the latter Cataplasim: for if the Tumour be opened before the Matter be well concocted, it will be the slower in healing.

If the Tumour become more compact, and thrust out in a Cone, and look pale, defer not the opening of it: For as the opening of Aposterns before the Suppuration be perfected, weakens the heat, and renders them crude; so the letting the Matter lie long after it is made, gives way to its putrefaction, whereby the Parts underneath corrupt, and the Abscess becomes sinuous.

The manner of Opening by Incision or Caustick, together with all Directions necessary thereunto, have been sufficiently treated of in the former Chapter. The Cure of it, by Digesting, Deterging, Incarning and Cicatrizing, you will see in the Treatise of *Ulcers*, and in the following Observations.

I shall begin them with some Instances of *Phlegmons* in their very first appearance: though I may doubt whether you will allow them for such, they being then so inconsiderably small, that the Patient himself thinketh it not worth while to send for a Chirurgion. Nay, when the pain hath encreased the Inflammation, and raised the Swelling big and hard, they, for the most part, permit them to be dressed by the next Pretender to Chirurgery, with Pul-tices, as I have said, of White-bread and Milk, and do not consult us till the Tumour be in its state; and then it is too late to repel them. Sometimes we may discuss them, but more frequently they suppurate, and are of longer Cure. Upon the Considerations fore-mentioned, it seemeth not easie for me to give you such Instances of the beginning of a *Phlegmon* as may be suitable to the design of this Discourse: therefore I have set down the fewer of them, and taken them from such accidental Causes as do generally make great Tumours, (if ill handled,) that you may thereby learn how to prevent their growth, by the timely applications proposed in the method of Cure.

A Man of about thirty-six years old, after a hard Journey on horse-back, sitting upon a cold bench, was seiz'd with a pain in his right Hip, insomuch that he was scarce able to get up to his Chamber. The next morning he complained to me of his ill night's rest by reason of that pain, he not being able to move that Joint. I embrocated the Part with *ol. ros. cum aceto*, and applied an *Empl. diachalcit. cum bolo*, and let him bleed in the Arm about 3x. ordered him a Clyster that afternoon, and an Anodyne Draught the night following of *3vi. syr. de meconio in aq. papaver. cum aqua cinnamoni hordeat.* whereby he rested better. I continued the Embrocation and Emplaster, by which, after a day or two, the Fluxion was seemingly wasted; yet he complained of a pain deeper in the Joint. I then caused a Bryony-root to be digg'd fresh out of the earth, and being washed, cut, and beaten to a pulp in a Stone-mortar, I chafed the pained Hip with it, and applied it in the form of a Cataplasim. It did not lie well on, but by the use of it two or three days it discussed his pain, and he was cured. This began like a *Phlegmon*, and afterward threatened a *Sciatica*: whither it would have tended, I leave others to judge; but from such little beginnings the greatest *Phlegmons* have taken their rise.

A Woman aged thirty-four years, walking in the street one evening, and passing near a Coach and Horses, was bit in the right-Breast by one of them. The next day she came to me, complaining of the pain, and shewed me her Breast. It was swelled to the bigness of a Hen's-egg, with Inflammation and hardness, the print of the Horse's teeth remaining in the skin near two inches distant from each side. I dressed it with *unguentum basilic.* and embrocated

the Tumour with *ol. ros. cum aceto*, and applied an *Empl. è bolo* over all; then let her blood, and sent her that night an Anodyne-draught of *aq. papaver. rhæad. cinnam. hordeat. cum syrapi de meconio* ʒvj. She was purged the next day with an *Infus. senæ*, &c. By this method the pain and inflammation were remitted, and a great part of the hardness: the remainder was totally resolved by the application of *unguent. basilic.* spread thick in the form of an Emplaster, and by repeating Purgations twice or thrice.

3. Observat. Of a Phlegmon.

A Man of about forty years of age, of a full body, having (as he thought) heated himself in walking, took cold, and was seized with a stiffness and pain in his left Thigh, about four fingers breadth above his Knee. The morning after I saw it swell'd and somewhat inflamed, I embrocated it *cum ol. ros. & aceto*, and applied an *Empl. axal.* then let him blood about ten or twelve ounces, and advised a Clyster that afternoon, and desired him to forbear full meals and strong drink. The day after he was purged with *pulvis Cornachin.* and, by repeating of the Embrocations and Emplaster, was cured of his Distemper.

4. Observat. Of a Phlegmon with an Herpes.

A Maid-servant about twenty-six years of age, by reason of a suppression of the *Menstrua*, was seized with a pain in her right Thigh on the outside. It growing more painful by the application of gummy Emplasters, I was sent for, and saw an hard collected Tumour of an oval-figure lying under the *musculus membranosus* with Inflammation; also an *Herpes* over-spreading the Tumour and that side of the Thigh. It was certainly raised by their improper Applications. I let her blood at least twelve ounces, and applied a mixture of two parts *unguent. nutrit.* with one of *popaleon*, and purged her the next day with *pil. cochiae.* By repeating the same Purgative three or four times, intermitting a day or two between; and afterwards, by the application of *unguent. nutritum* alone, the Inflammation was cooled, the *Herpes* extinguished, and the Tumour wasted.

5. Observat. Of a Phlegmon discussed.

A Woman of about forty years of age, scorbutical, and of a full body, was pained in her right Thigh on the inside. Somewhat she applied her self; but it growing more painful, I was permitted to see it. There was a hard Swelling with Inflammation, Pulsation, &c. as in a *Phlegmon* in its encrease. I let her blood about ten ounces, and embrocated it with *ol. ros. & chamæmeli*, and applied *cerat. Galeni* on it; and some hours after I sent her that Cataplasm *ex fol. malv. pariet. plantag. cum sem. Cydon. &c.* which she applied. A Clyster was that afternoon administred, and an Anodyne prescribed. The next day she was purged with this following Apozeme: *℞ fol. senæ ʒss. rhubarb. ʒij. flor. sambuci, macis, ʒij. fiat infus. in aq. matricariæ ʒviij. succ. aurantior. ʒiv. colat. adde mannæ ʒiiss. syr. de spina cervina ʒvj. dividatur pro duobus dosibus.* By the continued application of the Cataplasm the Tumour diminished with the hardness. In the declining of it I left out the Repellents, and added *pulver. balaust. & baccar. myrtillor.* and boiled them in Wine, and added only *Mel* in the place of the Oil: by which I dried up the remaining Humour, and restored the Part to its former Health. Yet she would not be satisfied without the application of an Emplaster, which was *Empl. è bolo.*

6. Observat. Of a Phlegmon discussed.

One of about fifty-five years of age, of a full body, subject to Gout and Scurvy, was taken with a Fever, which after a few days terminated in a pain of his right Arm about the *Biceps*, with Swelling and Inflammation. Cataplasms were applied of White-bread and Milk: but the Parts were thereby relaxed, and rendred more subject to Fluxion, which swelled the Arm round and deep amongst the Muscles. A Chirurgion was fetch'd, who, finding the Patient weak, and treated by unhappy hands, declined the meddling with it, as not having been consulted more timely; or, indeed, doubting how the Cure would

8. Obser-
vat. Of a
Pblegmon
suppura-
ted in the
Breast.

drinking thereof a few days, the Abscess digested, and healed soon after to a wonder.

A Maid of about twenty-eight years old, of a gross body, received by accident a blow on her right Breast, it swelled, and grew hard and painful. After several applications, the hardness and pain rather encreasing, she suspecting a Cancer, came to me. I viewed it, but saw no Symptoms of it. I embrocated it *cum oleo & aceto rosæ*, and applied an *Empl. de minio cum sapone*, and the day after let her blood, and then purged her with Whey, Manna and Cremor Tartar; by which the hardness was seemingly resolved for some time: but she being irregular in her appetite, it swelled again as when I first saw it. Upon which consideration I applied Emollients; and seeing the Tumour encrease, and she impatient at the sight of it, I applied a Suppurative Cataplasim *ex rad. & fol. althææ, rad. lilior. alb. &c.* By the continued use of it in a few days it suppurated well, and I opened it by Caustick in the declining part, and discharged a large quantity of Matter. I dressed the Abscess with Lenients, and continued the use of the Cataplasim till the Escar separated: then I deterg'd with *mundif. Paracelsi*, and applied *Empl. de mucilag.* and shortened the Tent. The Orifice growing less, and somewhat of the hardness yet remaining, I put in a short *Canicula* of Lead, and kept the Orifice open, till the hardness was totally resolved, and that it matter'd very little or not at all; then threw out the Tent, and applied a Pledgit of *unguent. diapompholig.* and permitted it to heal: which it did in few days. This was a pure *Pblegmon*, and lay deep in the Breast, and owed its speedy Cure to the perfect Suppuration was made in it before the Opening. For otherwise such Abscesses in large Breasts do frequently terminate in sinuous Ulcers, and grow callous, by reason of their laxity and want of natural heat.

9. Obser-
vat. Of a
Pblegmon.

A Gentleman of about fifty-six years of age, standing long in the cold to see some extraordinary Show, was taken with a pain above his left Hip, and the second day after sent to me for an Emplaster. The Messenger not telling me the name of the Patient, nor where he lodged, I sent him an *Emplast. è bolo*, proper to resist, and defend a Part from Fluxion. The fourth day after he sent to me for another Emplaster, signifying to me that his pain was much encreased; and two days after sent for me. I went, and saw a large Tumour lying upon the *Ilium* backwards, with great Inflammation and hardness, with all the Symptoms of a *Pblegmon* near its state. I directed a Cataplasim to be made *ex summitat. malvæ, bismalvæ, absinthii, flor. sambuci, meliloti, sem. lini, fenugræci, far. hordei*, with an addition of *mel. commun. ol. cham. vitell. ovor. & croc.* and in the interim let him blood, and advised a Clyster to be administered that afternoon. If this person had been of a temperate life, and been let blood when he sent for the first Emplaster, this Tumour might have been happily repelled: but it was now too late to discuss it: yet I repeated the application of that Cataplasim till I saw it more collected, and then I hastened Suppuration, by one of the milder Suppuratives set down in the method of Cure; by the use of which the Tumour was more collected and raised into a Cone, and by its pale colour and thinness of the skin gave an assurance of a perfect Suppuration. Then I applied some of the milder Caustick, with an *Empl. diachyl. simpl.* over it, and the Cataplasim over all. The next day I took off the Dressings, with design to divide the Escar: but it was done to my hands, and a large quantity of a well-digested Matter was discharged. I fomented the Abscess with a Stupe wrung out of Milk, and dressed the Escar with a Pledgit of *unguent. basilic. dipt in ol. ros.* and continued the application of the Cataplasim. Thus in few days the swelling asswaged, and the Escar separated. I then endeavoured Deterfion with *mundif. Paracelsi*: but the Abscess

scels being large, and the Suppuration in the middle, and the Part not very capable of Bandage, there remained a large hollowness, which put me upon a necessity of laying it more open, for the speedy effecting the Cure; which I did with a pair of Probe-scissors. This work is necessary in such large Phlegmons; and therefore it is, I suppose, that Sennertus places his Chapter *de Sinubus* next to that of a Phlegmon. After I had made this Incision, I dressed it with that Digestive *ex terebinth. cum vitello ovi*, &c. and having digested it, I incarnated, by adding *pulv. rad. iridis, aristoloch. rot. sarcocol.* &c. to the Digestive: and by the help of the Vitriol and Alum-stones, *unguent. tutie* and *Emplast. diachalciteos*, I cicatrized it.

In the time of the Civil Wars, a Gentleman in the West-country was sorely pained with an Inflammation and Swelling upon the *Os Ilion* on the left-side. Some one applied a Cataplasm to it of White-bread and Milk with Hogs-lard; a Medicament proper to assuage Pain, but being applied in the augment in a full Body, it relaxed the Parts, and made way for the influx and encrease of the Tumour. Upon further Complaint, some other of his Acquaintance advised the application of Houseleek, &c. by which the native heat suffocated, and the part gangrened. Sir Alexander Fraser, chief Physician to His Majesty, and my self were fetch'd, and saw the Tumour black, and sunk the compass of the palm of a hand. We made deep Scarifications, and wash'd it with a Solution of *Aegyptiac. in spir. vini*, and filled the incised parts, especially in the circumference between the sound and gangrened parts, with *Merc. præcipitat.* and applied over all a Cataplasm, such as you will find set down in the Chap. of *Gangrana*. Where we had applied our Precipitate, we found a perfect white Matter: it was but little in quantity, but by the use of the same Powder we saw the Mortification stopt, and the Escar in few days after separated with good digestion. The Ulcer was afterwards deterged with *mundif. Paracelsi*, and cured by Epuloticks, as in the Cure of Ulcers.

As Phlegmons are subject to Mortification, through unseasonable application of Medicaments in time of their state; so also in fat Bodies they are apt to gangrene after opening, if that Fat be not speedily digested out. Thus it happened to a Person labouring of a Phlegmon on the *Os sacrum*: After the discharge of Matter, the Ulcer became crude and gangrened. Another Chirurgion was consulted, who scarified the Abscess, and, by his warm applications, supposed he had extinguish'd the Mortification: but it appearing otherwise, I was fetch'd, and saw the lips and parts within gangrened and gleeing. We scarified the lips; but finding them to be gangrened more within than without, we pared them off round, then scarified the Abscess within, and cut out the putrefied Fat, and with an armed Probe dipt in *oleo garyophyllor.* hot, cleansed the Abscess, and fill'd the Scarifications with *Merc. præcipitat.* We then dress'd up the Abscess with a mixture of *unguent basilicon* & *ol. terebinth.* and applied Cataplasms and Fomentations, as is usual in such cases. The next day we came provided with actual Cauteries, but found the Abscess warm, and disposing to digestion in the lips and fleshy parts: and from that time it digested well. But in the *basis* of the Ulcer, where the Mortification had reached to the *Periosteum*, the slough separated more slowly: but by the warm application of Lenients it came off, and the Ulcer happily incarnated.

Over-strict Bandage is a frequent cause of Phlegmon, of which I do make observation for the cautioning of the young Chirurgions in the case of Fontanels.

A Person of a plethorick body, aged about thirty years, being subject to hot Defluxions of sharp Rheum, was advised to make a Fontanel in her Arm by Caustick. I applied the milder, with an Emplaster and moderate Bandage

10. Observat. Of a Phlegmon gangrened by improper applications.

11. Observat. Of a Phlegmon gangrened after Opening.

12. Observat. Of strict Bandage.

to retain it on, with advice to slacken it, if there appeared cause. The next morning she told me the Bandage had been easie all the day, upon which account she had not slackned it; but it pained her in the night, and swelled her Arm. It did not seem too streight; nay, I think if it had been slacker, it would have slipt down her Arm, being taper grown: but the Tumour shewed the Bandage to be too hard. I loosened it, and took off the Caustick; where finding a small Escar, I divided it, and dress'd it with *unguent. basilic.* with an Emplaster to retain it on, leaving the Arm at liberty. She was easie that day; but about twelve of the clock at night she was waken'd with the pain, and sent to me. The Fontanel not being in fault, I return'd her a glass with *ol. ros. cum aceto* to Embrocate her Arm. The next morning I visited her: there appeared less fulness and no heat, but she complained of a numbness in her Hand. I left her to the use of the Oil: it wore off in a day or two. After the separation of the Escar, I put in a Pea, and fitted it with Bandage: from which time it continued easie. I foresaw this disturbance, and advised her to bleed and purge first, but could not prevail.

In fat fleshy Arms you may produce the like by a moderate strict Bandage, when the Humours are in a fermenting disposition. The way to avoid such inconvenience, is first to make evacuation by bleeding or purging: for from such little beginnings, great evils do follow. And if this Fontanel had been made by the *lapis causticus*, it had penetrated deep, and might by such a flux of Humours have been shrewdly disturbed: or if it had been made by Incision, it would have been inflamed; and then the conclusion would have been, that it was made upon a Nerve or Tendon; though possibly in such fat Arms there is none within half an inch under it.

13. Obser-
vat. Of o-
ver-strict
Bandage.

I shall give you another instance in a Gentleman who came out of the Country, and put himself into the hands of a Chirurgeon, in which case I was consulted. The Tumour was in his left Arm upon the *Biceps*, and was caused by over-strict binding of his Issue. It was raised below the Bandage; and as it abounded with Matter, it discharged it self into the Fontanel. The Cure was performed by the application of a Caustick upon the lower part of the Tumour, and the Matter was let out by cutting deep into the Escar; after which it was digested and incarned by the same Chirurgeon, as in other Abscesses is usual.

Many Instances we have of this kind in Infants, who cannot express their grievances, especially where Issues are cut in their Arms: The Nurses sometimes binding them too slack, whereby the Pea slides out, and the Issue being almost closed before the next dressing, they, to recover their error, force in another, and by too hard Bandage raise a Tumour with Inflammation, to the great disturbance of the Child.

14. Obser-
vat. Of
Gangrene
from over-
strict Ban-
dage.

Thus, sometime since, a Child in my neighbourhood was seized with an Inflammation from the Shoulder down to the Elbow, and from thence an oedematous Tumour reached to the Fingers-ends, the Fontanel it self gangrened. I threw out the Pea, and scarified the lips of the Ulcer, and dapt it with *ol. terebinth.* hot with an armed Probe, and applied Pledgits dipt in a mixture of the said Oil and *unguent. basilicon*; and having fomented it well with a *decoct. absinthii*, &c. I applied a Cataplasme *ex far. bordei & fabar.* decocted in *Oxymel* over that part of the Arm, and upon the remote parts I applied *cerat. Galeni* with good Bandage from the Hand upward. By this means the Humour was moderately repressed, and breathed forth; the Escar also separated in the Fontanel: after which, the Ulcer incarned with common Sarcoticks, and the Ulcerations about it were cured by *unguent. tutia*, and such-like Epuloticks.

A Person

A Person of about forty-five years of age, of a full body, subject to various Diseases from plenitude and *cacochymia*, as Lethargy, &c. was lately in danger of sinking under an Apoplectical-Fit, but was freed of it by a translation of those Humours into his right Leg, with great Pain, and an Inflammation of a deep red colour possessing only the skin; but the Swelling was great, reaching from the gartering to the very Toes. It was *Pblegmon Erysipelatodes*, and in his case required to be breathed forth by Medicaments of a temperate quality, yet somewhat cooling. To which purpose I presently fomented it with Claret-wine, and applied *ceratum Galeni* over all the Leg, with a moderate Bandage; then let him blood, and directed him a Clyster. The next morning I took off the Dressings, and found his Leg in a better condition. I bathed it with Claret-wine wherein I had boiled *summitat. absinthii, salviae, flor. sambuci, ros. rub.* and applied *ceratum Galeni*, as before, and continued that method some days; he purging himself the while with Whey, *Manna*, and *cremor Tartar.* Thus the heat remitted, and the Swelling relaxed; yet the *Cuticula* was fretted off in several parts, and I felt a small collection of Matter under the skin on the inside of the Ankle; which I gave vent to by an Apertion with a Lancet, and discharged about a Spoonful of a thin white Matter. I applied a Pledgit of *basilicon* upon it, and dressed the Vesications with *unguent. tutiae*; by which, in three or four days, they were cured: after which, I put him a laced-Stockin on that Leg, whereby it was reduced to its right tone. I had made him Fontanels *inter scapulas* heretofore, which he continues to good purpose.

15. Observat. Of Pblegmon Erysipelatodes.

A Maid aged twenty-four years, was seized with a pain in her Head, and Rigour of a Fever; the second or third day she had an Inflammation in her right Leg a little above her Knee, and so downward. After several applications of Parsley, Butter, &c. I saw it. The Inflammation was in the Skin, and reached down from the Knee in a red streak about four fingers breadth to the Instep: That inflamed Skin was tense, but seemed to have Matter lying under it. I made Apertion with a Lancet on the Knee, and discharged a well-concocted white Matter. I then made another Apertion lower, and another in the lowest part, with like success: the blood also trickled down in good quantity from the little wounds in the skin. I permitted them to bleed, she having need of such an Evacuation; then dressed them up with *unguent. basilici cum vitello ovi* upon Pledgits of Lint, and applied *cerat. Galeni* over them, with convenient Bandage. The next day she was purged with *Elect. lenitiv.* and her Leg was stuped with *decoct. salviae, betonicae, flor. ros. rub.* We dressed the Apertions as before. This Maid was lately come out of the Countrey, and, by reason of the change of Air and course of life, abounded with Humours which required Evacuation: therefore during her Cure I let her blood, and purged her twice or thrice, by which she was restored to health; and the Matter having been so opportunely let out, the Inflammation went off, and the Apertures cured by a few dressings off *unguent. tutiae*.

16. Observat. Of Pblegmon Erysipelatodes.

A Man aged about forty years, of a healthful complexion, hastening from London (in the time of the last great Sickness) to his House in the Countrey, by great journeys on Horse-back, to avoid Infection, which the Inns on the Road were subject to, chose to rest himself on his way, by lying down in the fields, whilst his Horse baited on the grass near him. But having heated his body by journeying, he took cold by lying upon the ground, and in rising felt a great pain in the region of his right Kidney, and returned to his House very ill. He consulted the Physicians in his neighbourhood. They at first suspected some Disease in that Kidney: but there being no Symptoms of it in his Urine, they imputed it to other causes, and prescribed Remedies accordingly.

17. Observat. Of Pblegmon by Translation.

dingly. But the Cure not succeeding, they advised him to *Buckstone-Waters* in the County of *Derby*: whither he went, and returned more pained. I, being at that time in a neighbouring County, was sent for, and found him in his Bed much emaciated. From the region of that Kidney down to his Hip and Thigh, there appeared a more than ordinary fulness, and in that Groin there was a painful Swelling, in which there seemed to be Matter, but it lay deep: I applied to it a suppurative Cataplasm *ex foliis & rad. althææ, rad. lilior. albor. &c.* to suppurate it. To the other pained Parts I applied *Empl. è bolo*. By the use of the Cataplasm, the Tumour in *Inguine* appeared daily more full of Matter, and seemed to me to be made by Translation; therefore I did not attend a perfect Suppuration, but applied a Caustick, and, cutting into the Escar deep, discharged a much greater quantity of Matter than that Cavity was capable of; besides, by its fœtid smell, it seemed to have been long made. I dressed it up with Lenients. From this Dressing his pain lessened; but the Matter which discharged daily from it was very much. I made a search with a Probe, and felt it pass under the *Pubes* into the Muscle *Psoas*, (as I conjectured:) upon sight of which, I contented my self in keeping the Orifice open for the discharge of the Matter, and prescribed him *Vulneraries*. The fulness from the region of that Kidney to the Hip continuing exceeding painful, I made a Seton upon the latter, hoping thereby to give a vent to that Humour. The first three or four days it Matter'd little; but afterwards, in drawing the Seton, the Matter burst forth in great quantity: upon sight whereof I cut the two Orifices into one, and took out the Seton, and dressed it up with Lenients. This was a fœtid purulent Matter, and seemed to be of the same kind with the other which discharged from his Groin. His next great complaint was of a pain in the region of that Kidney. I supposing that the original Matter might arise from thence, and pass inwardly to the Groin, and outwardly to the Hip, thought, if I could give a vent there, it might possibly intercept the Matter in its course to the other Abscesses. I therefore applied a Caustick upon the most likely part. The first four or five days after the division of the Escar there appeared no Matter; but before it was quite separated it made its way plentifully out, and the other Abscesses were more governable, and the Patient was certainly much relieved. But one afternoon, while he was lying in Bed, and telling us a story of some pleasant passages in his Profession, he suddenly died, we supposed from an eruption of the great Artery; for we found much blood poured forth from all the Abscesses, but especially that on the region of that Kidney. During the time of his sickness his Urine was without Blood or Matter, and passed freely without the least disturbance. I would gladly have Opened his Body, but was not permitted.

Observatio casus non vulgaris de Sarcomate in Arteria Axillari reperto, communicata à Cl. viro Ed. Duke, M. D.

18. Obser- Die 5^o Aprilis, Puella quædam 16^a annorum, Filia Nobilis Viri, febricitavit, & capite dolebat. Die sequente de cervice rigida & dolente conquesta fuit. Tertia Tumor occupavit humerum. Quarto vocatus adfui, Febre laborantem inveni, & Tumore circa humerum gravatam. Huic menses paulo antea substituerunt, & fallaci impetu in massam sanguinis traducti ejus molem adauxerunt, collisique ad invicem particulis putridis Febrem excitaverunt, cujus ope naturam partem sanguinis concitati ductilisque in humerum (sui levandi causâ) transtulit. Apparatus sane pro Pblegmone notha fruenda idoneus. Hisce perpensis, Revulsio instituitur per phlebotomiam in latere opposito, præmisso Clystere, necnon discutientia Tumori adhibentur, Febrisque pro more suo tractatur. Septimo die Chirur-

gum vocavi Artis peritissimum, Dominum R. Wiseman. Ad trutinam res denuo revocatur; & ex indicatis ducimur Revulsionem repetere, placideque per media conferentia humorem ducere, sine tædio & incommodo Suppurationis. Elapso autem biduo adsunt Abscessus maturescentis indicia, & commodum satis Materia in musculo Deltoide circa ejus initium presentiam sui testabatur, cui per Causticum datur exitus. Aperto Apostemate, effluxit illico pus laudabile, quod per intervalla debita & partitim fuit eliminatum. Tertio post apertionem die consistentia Materiæ tenuior & male olens: quinto autem in saniem degener, cum fæore insigni & cadaveroso. Chirurgus ad mundificantia progreditur: sed sub examine cavitatis occurrit nescio quid grumosum, seu potius densa & thrombo magis coherens substantia cruenta. Stylo igitur exploratorio undiquaque per Abscessus cavernam circumacta, ductus versus interiora detegitur: caute interim tractatur ulcus, ne sanies effusior vires attereret: ultro tamen per noctis intervalla effunditur, & certitudinem erosi vasis confirmavit. Jam tandem Catarrho perpetim in fauces depluente, aphthis os & gulam obsidentibus, Febræque scintillante in Materia maligna, quæ sparsa & indomabilis sub uniformi naturæ concoquentis opificio subigi recusavit, virtus vitalis fatiscit, & morbus insolens vigesimo primo ab invasione die natura triumphavit. Aperto cadavere, ecce, cruentum illud coagulum seu sgmentum sanguinis ad latera claviculæ conspicitur, perque semitam arteriæ axillaris frequenti hujus substantiæ conspectu ducimur rectâ ad cordis ventriculû sinistrum; quo loci ad ovi columbini magnitudinem congestum invenimus Sarcoma pelliculâ densâ circumvestitum. Mirum sane hospitem tam male moratum palatio illo augusto toto frui, sine ullo viventis de dolore cordis sensu, vel symptomate læsarum ejus exinde actionum eminenti. Imo per totum morbi decursum interrogata quomodo se haberet, quàm optime se corde valere respondit; & sponte etiam non longe ante obitum in eadem verba prorupit.

C H A P. IV.

Of Tumours from Milk.

MILK (though I cannot say that it is often the matter) is certainly the occasion of many Tumours of divers kinds. I know Authors make it the material Cause of many of the Diseases of the Breasts: but such Men must be understood warily. For if by *Milk*, in this Assertion, they mean Milk actually generated, and separated from the Blood, then I know but few cases in which that can be supposed to be the matter of a Distemper: for when it is in that condition, it is laid up in certain *tubuli lactei*, which, being spread all over the Breast, do unite their branches after the manner of Veins, still growing into bigger trunks, till they do end at last in the Nipple. Now the motion of this Milk being *de vasis minoribus in majora*, what is once separated from the Blood in the Glands of it into those Vessels, hath nothing to stop its progress till it comes to the very place of its exit from the Nipple. If any Stop preternaturally happen, as the compression of the Vessel by some Tumour of a Glandule, or the like, then indeed a varicosity of the lacteous Vessels may arise: of which case you may see an Observation in the Chap. of *Varix*.

This case is rare; but there be others very frequent: *viz.* That the Glandules through which Milk is separated, may either, through fault of the Ferment by which they make that separation, produce divers variety of Distem-

pers, or through an indisposition of their Pores not permit a due percolation of it from the Blood. When any of these things happen, there is a disturbance in the Circulation, and Fluxion doth arise, which soon produceth a Tumour suitable to the Humour so stirr'd up; viz. *Phlegmon*, *Oedema*, *Scirrhus*, *Scrophula*, yea, sometime *Cancer*.

This Discourse may serve for a general Account of the *Causes* of the *Milky Tumours* of the Breast, and may easily be enlarged to such particular cases as may emerge.

Differen-
ces.

The *Differences* may thus be enumerated. If the Ferment of the Breast be over-active and vigorous, it separates Milk with too great violence, causing thereby an over-fermentation in the Part, which usually produceth a *Phlegmon*, if the serum be hot, or partake much of Blood: otherwise it raiseth an *Oedema*; or, if Matter dispose to coagulation, a *Scrophula*: which are the most frequent species of Tumours generally reputed to arise from Milk. Any of these three may degenerate into a *Scirrhus*, and that *Scirrhus* into a *Cancer*.

Signs.

The *Signs* are visible. If the first happen, there are all the Symptoms of a *Phlegmon*, heat, redness, tension, pulsation, &c. if the second, large distension, with pain, but no heat: if a *Scrophula*, then hard kernels are easily felt and distinguished, &c.

Prognos-
tick.

Tumours made by the over-eagerness of the lacteous Ferment go easily off, if no other Symptom attend them: sucking and drawing the Breast, for the most part, dischargeth the Milk as fast as it can be generated, and then all the evil is over. But if the Fermentation produce any disorder in the Blood, the Patient finds more or less of danger, according to the quality of the Tumour produced: viz. a *Phlegmon* endangereth them of a Fever; oedematous Tumours are apt to grow ulcerous, and sometimes scrophulous and scirrhus, and become long of Cure, &c.

Diet.

Forasmuch as it frequently happeneth to Women in Child-bed, that their Breasts do extraordinarily swell, by reason of the abundance of Milk which floweth into them, and that it stirreth up Inflammations, Apostemations, &c. therefore their *Diet* ought to be slender, and of such quality as may less dispose the Humours to ferment: to which purpose I shall refer you to the regulation prescribed in a *Phlegmon*.

Cure of a
Phlegmon
in the
Breast.

The Medicaments proper to diminish the Milk, are Lettice, Purslane, Endive, Succory, Smallage, &c. The Seeds of Wild-Rue, Cummin, Basil, powder'd and given to the quantity of ʒj. daily in Broth, will dry up the Milk, as Authors write.

The Milk is usually drawn out of the Breasts by the Infant's sucking them: but in case the Child be so weak it cannot suck, or doth not enough empty them, some others are to be admitted to help them; or they may put young Whelps to suck them, or some neighbouring Woman. But the Mother may draw her own Breasts her self by an Instrument sold for that purpose.

The Tumour made by the Milk, is restrained by the application of Nightshade, Lettice, Plantane, Vine-tops, Bramble-buds, Horse-tail, &c. or *ol. ros. myrtill. cum aceto*, &c. as we usually treat *Phlegmons* in the beginning.

It may be dissolved by the application of Mints, Catmints, Rhue, *sem. fœnugrac. cumini, fœniculi*, &c. or dried up by the applying cloths dipt in *aqua calcis*, or a Solution of *sacchar. Saturat. in aqua spermat. ranar.* during which time fine Tow may be sprinkled with Ceruse, and applied to the Arm-pits. But in the beginning of Fluxion we are rarely consulted.

Where I have by chance come in to Women that have been much pained with swelling in their Breasts from Milk, I have applied *Emplast. e bolo*, or a Cataplasim of *far. bordei, subar. lentium*, decocted in *oxymel*, or *cerat.*

cerat. oxelæum, or *santalium*, and at the same time Tow dipt in *oxyerate* under their Arms.

If the Inflammation be gone too far towards a Suppuration, (which usually is before we are called) then it must be promoted with Suppuratives, and open'd by Incision or Caustick, and treated as a *Phlegmon* hath been.

Where the Swelling hath been hard, and not inflamed, *R. summitat. absinth.* Cure of
pulv. 3ij. sem. lentium, sænugræci, sæniculi, an. 3j. suc. hyoscyami, cicut. an. 3ij. Oedema-
unguent. dialthææ 3ij. axung. anatis, anseris, an. 3j. sevi cervini 3ij. styracis tous Tu-
liquide 3℔. ceræ q. s. fiat Ceratum. mours of
the Breast.

Cicuta boil'd in Wine and beaten up with *axung. porcin.* resolves the hard- Caution.
ness in the Breasts; but applied alone, stirs up heat, and ulcerates the Skin. Green Mints or Chickweed are common applications, and of good use, either alone, or mix'd with other Medicaments, in all the hard Swellings of the Breast occasion'd by Milk. All Emplasters applied to the Breasts ought to have a hole snipt in them for the Nipples, lest they be fretted by them; especially that the Milk may be drawn forth while the Medicaments lie on.

A Young Gentlewoman endeavouring to dry up her Milk when it was too late, put her Breast upon Apostemation. I prescribed her an Anodyne Cataplasm, and a day or two after applied a Caustick, and gave vent to the Matter; then dressed the Escar with *unguent. basilic.* and applied *cerat. dialthææ* over the whole Breast, and left her of the same Medicaments to dress her self with, and once in two or three days visited her. After the Escar separated, and the Matter was well discharged, I dress'd her with *unguent. diapompholyg.* and left her of the same to finish the Cure. Many of these, where the Matter hath lain superficial, I have cured as easily. 1. Obser-
vat.

A Young Woman, after Child-bed, was vexed with a Swelling in her Breast. One was fetch'd who possess'd her Relations that it was a Cancer, and treated her accordingly. But her Breast growing more painful, her Father, much apprehending the danger of such a Disease, came to Sir Fran. Pr. and acquainted him with his Daughter's Distemper, and the Judgment that had been given of it; desiring that he would instantly go with him to see his Daughter. The Physician, wary in giving his Judgment in Chirurgery where there might happen any dispute, advised the Father to take me along with them. We went together, expecting to see a Cancer in the Breast: we found her in bed bemoaning her condition. I viewed her Breast, and saw it very big and inflamed, and felt it all apostemated, and the Matter perfectly well suppurated, the Skin thin and ready to break. I could scarce believe what I felt and saw. I declared the swell'd Breast to be a *Phlegmon* well suppurated, and fit to open. The Physician look'd and felt it; but, being prepossess'd with the contrary, did not readily give credit to what he felt. I then proposed the applying a Cataplasm of White-bread and Milk, assuring them before morning they should find a Porringer-full of Matter discharged. They consented unto it. We took our leaves, and left them to apply it: They did so; and the next morning the Old Gentleman made the Physician a Visit, and confirmed the truth of what I had foretold; and by the use of *unguent. basilic.* cured it without farther trouble. 2. Obser-
vat.

The Matter being well suppurated, and a convenient Opening made for discharge, they generally heal of themselves, if the habit of Body be good: but where it is otherwise, or irregularly treated, there it is vexatious in the Cure.

While I was dressing a Patient in a Citizen's house, I was desired to look upon the Breast of the Gentlewoman of the house. She had lately Lain-in, 3. Obser-
vat.

and from abundance of Milk, and ill handling, her right Breast had been apostemated, and was broken out in many holes. A Woman famous in the City for Dressing Sore-Breasts, was her Chirurgion. I observed, that the Breast had at first broke in the upper-part in a small pin-hole; and the Matter, not having had sufficient discharge, had subsided, and so made the other Openings, and afterwards passed an inch lower than any of the Openings, and could not be discharged otherwise than as it fill'd up the *Sinus*, and ran over, or was press'd from below upward with her hand. By this means the Breast continued inflamed and apostemated; insomuch as it was impossible to cure it by that method till it had apostemated the whole Breast. I pitied the Patient, and wondred that a Woman so famed for such Cures could be so ignorant, and yet preserve her Credit with that Sex.

I shewed the Patient the cause of her pain, and the unlikelihood of being suddenly cured by such a Chirurgion, and prevailed with her to permit me to lay on a Caustick on the depending Part; and having made an Escar the compass of a Three-pence, open'd it, and gave vent to the Matter, and left her a little *unguent. basilic.* to apply daily upon that Orifice, and some *unguent. tutia* to dress the rest. By the use of which she was cured in few days, without more Directions from me. Yet the good Gentlewoman, I dare say, is of so kind a nature, as she would quarrel in defence of her She-Chirurgion.

Observat. A young Gentlewoman, after Child-bed, being indisposed in her health, her left Breast became diseased, and swell'd. They contented themselves with such help as those about them could afford. But after some days it growing more painful and swelled, the Apothecary brought in his Brother, who endeavoured Suppuration, and after some while gave vent to the Matter, and proceeded in the Cure: But while he was dressing that Opening, the Fluxion encreased, and other Abscesses were raised, and from the several Apostemations sinuous Ulcers were afterwards made. Thus the work became difficult. I was consulted. In the pulling out one of the Tents, a thin white Matter issued out in great quantity: my Brother-Chirurgion call'd it Milk; but I thought it Matter, and observ'd the Abscess to have begun deep in the body of the Glands, which, through length of time corrupting them, rendred the Swelling hard; and the Tent stopping in the Matter between Dressings, had occasioned that large discharge we then met with. The method of Cure consisted in the enlarging of that Orifice where the Matter seem'd to be detain'd, and then to proceed with Deterfives, &c. They entertained me in the Cure, and I continued my Brother-Chirurgion. We began with the application of a Caustick to the Part round about the Orifice, stopping the hole with Lint; by which means in a short time we made an easie way for the Matter, and saw no reason afterwards to think it Milk.

As the Escar separated, a *Fungus* thrust forth, which we sprinkled with *pulv. præcipit. rub.* dressing up the Escar with *unguent. basilic.* and the other Openings with *unguent. diapomphol.* and *cerat. dialthææ* over all. After a more full separation of that Escar, we, observing the *Fungus* to rise more large, applied a Stupe wrung out of a *decoct. summitat. absinth. rutæ, menth. flor. ros. rub. balaust.* made in Wine and Water; and the while sent for some *chalcantum*, which we applied upon the *Fungus*, and Pledgits of *unguent. tutia* over the ulcerated parts. The second day after, we took off Dressings, and found an Escar made by the Catheretick, which we thrust off, and dressed it again with the same, and continued the use of Escaroticks. During those applications, we applied over the Breast the *Empl. è bolo* to restrain the Influx: but yet the *Fungus* encreased upon us, and raised a Swelling between that and the other Orifices. Upon which consideration we applied a large Caustick upon that

Swel-

Swelling, which laid some of the other Orifices into this; then divided the Escar, and dressed it up with Lenients, and covered the *Fungus* with Escaroticks, where-ever it began to thrust out, by which it was kept down. But after the separation of this latter Escar, we seeing the *Fungus* great, and the way of extirpating it by Escaroticks slow, and fearing the ill consequences of it, I press'd with my finger under it, and at once broke into it, and pulled it out in pieces; then fill'd up the place with *Merc. præcip.* and *mundif. Paracels.* upon Pledgits, with the aforesaid Emplastr. over the whole Breast, and bound it up. The second day after that we opened it again. And by this same method often repeated, we subdued the remainder of the *Fungus*; and raised a firm basis on which we incarnated, with an addition of *pulv. rad. ireos, myrrhæ, sarcocollæ* to the foremention'd Mundicative; and then applied *cerat. Agrippæ* over the Breast, and in few days cicatrized it with a smooth *Cicatrix*, the lips falling in by the benefit of nature, which was assisted the while by Traumatick Decoctions, &c. as in such cases is usual.

It happeneth very often, when we have cured one Breast, the other swelleth, from the abundance of Milk, and grows hard, and apostemates. Sometimes we have both Breasts thus diseased at one time. Such was the case of a Gentlewoman in *Clerkenwel*; both her Breasts had been long swelled, and after apostemated, by reason of the pain; several Abscesses were made and their Matter discharged by such Openings. In progress of time the Ulcers became sinuous and callous, with induration of the Glands. I was entertained her Chirurgion, and began my work with Fomentations and Cataplasms discutient and resolving, as *rad. S. fol. althææ, hyoscyami, summit. cicutæ, menthæ, rutæ, flor. sambuci, sem. fenug. lini, &c.* with *far. lentium, bordei, axung. porc. anatis, anseris, &c.* and in dilating the Orifices, and deterging with *mundif. Paracelsi*, with *Merc. præcip.* and *alumen*, as I saw cause. While I was thus trying my endeavours by the method aforesaid, new disturbances arose within, which put me upon the necessity of laying such places open by Caustick as might best serve for the discharge of Matter. After separation of the Escar, I again deterg'd and healed them, as hath been shewed in such-like Ulcers.

How they are to be treated when they are Strumous, Scirrhus, or Cancerous, you may see in their proper places.

CHAP. V.

Of Abscesses and Corrosive Ulcers arising from Distempers of the Uterus in Child-bed.

BUT it is not the Breasts only that are troublesome to Women by the frequent production of such painful Diseases. The *Uterus* is (though not altogether so frequently, yet) much more terribly affected in Child-bed, producing Fevers of very malignant and venomous natures, and soon making *Phlegmons* or worse Tumours, sometimes in the *Uterus* it self, and sometimes in other parts of the Body, there being none of them on which the Uterine ferment hath not an influence. The exorbitances or degenerations of that, whether from a hurt in Labour, from part of the After-birth left behind, from Cold taken, or the *Lochia* stopped, do soon produce such virulent Distempers

stempers in the blood as make it cast out a Tumour, either upon the Part it self, or else outwardly upon the Muscles of the Body, where when they light they prove corrosive, sometimes eating out the flesh in which they lodged, which falls off in whole pieces, without that change of colour in the Skin which is in Gangrenes; insomuch that sometimes the Bone it self is laid bare by them.

Causes. The *Causes* are, (as I have said) hard Labour, the *Uterus* hurt, or part of the *Secundine* left behind, Cold taken in Child-bed, and a predisposition in the Humours by reason of their peccancy in quantity or quality.

Signs. The *Signs* may be taken from their *Causes*; and the manner of the Abscess may demonstrate its malign nature, and evil quality.

Prognostick. The *Prognostick* may be taken from the largeness or other qualifications of the Abscess, and the Symptoms that happen to the Body thereupon. If the Tumour happen only from some little disturbance down to the Womb of a Person otherwise of a good habit of body, the Cure is hopeful: if part of the After-birth be retained, there is no hopes of a Cure till that be removed; nay, if it stay so long as to induce a putrefaction of the Part, it will be too late then to remove it.

If the Body be cacochymical, the Tumours are apt to degenerate into very venomous and malignant Abscesses; which if they do not suddenly kill, do at least produce ill-condition'd Ulcers hard of Cure, and for the most part mortal in the long-run of the Disease.

Cure. In the *Cure* of these Abscesses you are to inform your self how the Womb is disturbed, and appease that; and if any part of the After-birth be left behind, to endeavour the bringing that away; and by good Sudorificks, Cordials, &c. to expel the venom, and fortifie the spirits against the malignity that is thereby contracted, and to contemperate the heat and acrimony by Juleps and Emulsions.

The Swellings arising from these require to be treated in their beginning with moderate Repellents and Discutients. Afterwards, accordingly as the Matter predominates, make way for its discharge, and Cure them as in the Treatise of *Ulcers* is shewed.

1. Observat.

A Young-woman, after Child-bed, was seized with a great Pain and Swelling in her left Groin and Thigh with Fever. Sir Charles Scarborough and Doctor Weatherly were consulted. They prescribed Bleeding and lenient Purgatives, to evacuate the Humours; also Cordial-Juleps, &c. to contemperate the heat, and fortifie her spirits against malignity. I was also call'd in, and by moderate Repellents mix'd with Discutients in Fomentations, and Emplasters with Bandage, dispers'd the Humour in the Thigh, and restored that Part to its former temper: but in the mean time the Tumour encreased in that Groin. I suppurated it after the manner of a *Bubo*, opened it, and endeavoured Deterfion: but the *Sinus* reaching down the Twist, the Matter could not be discharged without laying it more open, as in sinuous Ulcers; by which method I cured it.

2. Observat.

A Gentlewoman in Child-bed was seized with Fever, and the ninth day complained of a pain in her right Foot. Sir John Hinton was the Physician, who treated her in the Fever, and had prescribed Discutients to breath out the impacted Matter in her Foot: but the pain encreasing, I assisted, and saw the upper-part of the Foot from the Instep to the Toes cedematous, but saw the inside of the Ankle to the middle of the Sole of her Foot inflamed, and seeming to apostemate. We, doubting the ill consequences of an Apostemation in that Part amongst the Tendons and Bones, and where the Skin is usually so hard and tough as our strongest Causticks will difficultly penetrate, resolved

solved to endeavour a restraint of the Influx, and so dry up the Humour affecting the Part : to which purpose we applied this ; *R. far. bordei 3vj. sem. lini pulv. 3vj. flor. cham. sambuci pulv. an. 3ij. flor. ros. rub. balauft. an. 3j.* These were boiled in red Wine, with the addition of *mell. ros. & ol. myrtill.* to the consistence of an Emplaster. It being night, she was laid to rest with an Anodyne-draught.

The next morning I found the Patient somewhat relieved, and taking off the Dressings, saw the Tumour and Inflammation less. I continued the way of dressing, and applied *Empl. è bolo*, as an Intercipient, about the Ankle and upper-part of the Foot, and by Compress and Bandage dressed it up. By the application of these Medicaments we dried up the Humour in few days, and the Foot was seemingly well ; but (whether it was for want of Purging, there being some reason against it, or that the Humour was only restrained by virtue of the Dressings) there appeared again a Swelling on the Foot, and it apostemated in the Sole of the Foot in three several places ; which I opened by Caustick, to prevent the encrease of Matter, and, dividing the Escars, gave vent to it, dressing them up with Lenients, Pledgits of *unguent. basilicon*, and the Emplast. as before. I endeavoured daily, by Compress and Bandage, to hinder the flowing down of the Matter : but the position of the Foot gave way, and it sunk lower, and put me upon the necessity of intercepting its farther descent to the Heel by applying another Caustick, which proved effectual to the discharge, so that the upper Orifices healed. But this last Escar separated slowly, and left the great Tendon bare. I furthered its separation by the use of *ol. terebinth.* with *unguent. basilic.* applied warm, and incarnated the Tendon with a Sarcotick composed of a mixture of *pulv. ieros, myrrh. sarcocollæ, & Merc. præcipitat.* with *mell. rosar.* and *terebinth.* and cicatrized the Ulcer with Epuloticks. After it was cicatrized, the Sole of her Foot was so relaxed and tender, that upon the setting it upon the ground it became very much subject to pituitous Swelling : upon which account I caused such a Fomentation to be made as is proposed in the Cure of *Oedema*, and put on a laced-Sock, by which the weak Parts were strengthened, and she cured.

A Lady in the Country of about twenty-eight years of age, having gotten some hurt in Child-bed, was taken with a Fever, and about four days after was disturbed with a pain in her right Groin near the *Os Ilion*, which in a few days after swelled with Inflammation, and became a large Tumour, reaching from thence over the Belly to the *Os Pubis* like a Rowl of White-bread. They sent for Mr. Robert Morrey, an expert Chirurgeon of Chester, who met Doctor Smith, an eminent Physician of Shrewsbury. The Lady did not permit them to see the Tumour, whereupon they could give no certain Judgment of it, but prescribed an Anodyne-Cataplasm, which her Women applied. Some few days after the Abscess brake, and then Mr. Morrey was fetch'd again, and admitted to dress it. The Abscess was large, and discharged a great quantity of crude Matter making its way through the Skin by many Eruptions. He purposed the laying them into one : but the Patient not admitting of it, the Matter insinuated it self deep amongst the Muscles of that part of the Belly. She was then advised to take a Journey to London, but would not yield to it. In progress of time the discharge of Matter rendred her lean and hectic : and at last, when she was almost wasted with her Disease, she was brought to London in a Litter. Sir Fr. Pr. and my self being sent for, consulted with Mr. Morrey. We viewed the Ulcer, and found it seated above the *Os Pubis*, stretching towards the *Os Ilion*, discharging a purulent Matter. We dressed it with a proportionable Tent armed with *unguent. basilicon, Merc. præcipitat.* and *Empl. diachalcit.* It was upon consultation resolved that the Sinus should be laid

laid open, in order to the Cure; which accordingly was snipt up about two inches with a pair of Probe-scissors, and the incised Lips dressed with the common Digestive *ex terebinth. cum vitell. ovi*. We afterwards proceeded with Detergents, *mundif. Paracelsi, &c.* After which, Mr. Morrey took his leave of the Lady, and returned to Chester. Whilst I treated this sinuous Ulcer, she took her Vulnerary-drinks and Balsamicks, also Cordial-Juleps made out of distill'd Milk wherein had been infused proper Ingredients to dispose her Blood to a better temper. But she continued weak, notwithstanding all our endeavours, and the Ulcer would not cure farther than it was laid open. Therefore with one snip more I laid it open to the very end, and dressed it with Digestives, with good hopes of Cure. But after some days, finding the Matter not lessen, I made a search, and felt a *Sinus* penetrate into the cavity of the Belly under the *Os Ilion*. Considering the Original of the Distemper, I judged it to penetrate into the *Uterus* or neighbouring Glands, which I presumed were much swelled and ulcerated, and would be a work of Time; therefore proposed to her the removing to some neighbouring Village, to take the benefit of the Air. She did so, and while she was there I cured the *Sinus* to the very penetration, and did hope that it might have been kept as a Fontanel. But it continued to Matter very much. Upon which a Consultation was call'd, wherein the deceased Mr. Ed. Molins advised a Salivation by *Merc. dulcis*. She assented unto it, and to that purpose she was brought again to her Lodging in Town; and by a few Doses of *Merc. dulcis* a Salivation was raised, by which the Matter lessened, and the Ulcer dried. But a Soreness affecting her Mouth, as is usual in Salivation, gave occasion to a Chirurgeon, since dead, to insinuate himself into the Lady's Family, where he inveighed so much against the proceeding by *Mercury*, as lessened my credit with them; so that I was not capable afterwards to serve the Lady. Yet I prevailed so far, as that Sir Alex. Fraiser was consulted; to whom (in their presence) I represented the Condition of the Patient, and the method of our proceedings. He approv'd of what had been given, and assured the Lady it was the only way to cure her; and that if she would drink a good Decoction of *Sarsa*, with the Specificks usually prescribed in such cases, and afterwards put her self into a Diet of Asses-milk, she might enjoy a good health, and be obliged to acknowledge the good service I had done her. But she was prepossessed with the scandal of Salivating, and went out of Town a few days after; and, I suppose not following the Method prescribed, proper after *Mercury*, languished under a Consumption, as such People generally do. No *Mercury* doing well, where the prescribed method is not observed.

4. Observat.

An Apothecary's Wife living in my neighbourhood in the *Old Bailey*, after a hard Child-bed Labour, was seized with a Fever, and great pain in her right Thigh, from the Groin and Hip downward to the Knee, swelling the Member round, without Inflammation or discolouring the Skin. Sir Fr. Pr. was the Physician; and, I think, Sir C. Scarb. The Chirurgeons were Mr. Bing and my self; and in the time of my Sickness, Mr. Meredith a Chirurgeon dressed her. We fomented the Parts diseased with decoct. *summitat. absinth. majoranæ, beton. flor. ros. rub. cham. meliloti, summit. anethi, sem. lini, sænug.* in Wine and Water, and made a Cataplasim of the same Fæces with the addition of *far. fabar. orobi* and *lentium*, with *oxymel, ol. cham. &c.* But the whole Member being oppress'd and weakened by the Influx, it apostemated, and Matter was felt to fluctuate in several parts. We opened the most likely places by Causticks, and gave vent to a large quantity of purulent Matter. Then dressing the Escar with Lenients, we applied a Cataplasim, and rolled it up. She was somewhat relieved, but rested ill that night. At the next dressing

dressing we enlarged the Opening with a Pair of Scissors, and gave more way to the discharge of the Matter. Afterwards we continued our care in dressing her, and made other Apertions in Parts more declining, and endeavoured Deterfion by *mundif. ex apio*, &c. and by Injections made of *rad. aristoloch. rad. consolid. ireos, sarcocollæ, thuris, myrrhæ*, decocted in *aq. hordei* with *mel ros.* Many endeavours were used to cure these Ulcers; but the Matter grew more corrosive, and the flesh within dissolved, and we felt the Thigh-bone bare. The Humours all emptied themselves upon this weak Part; and, notwithstanding all our Endeavours, the Patient languished, and died in the space of eight Weeks.

I was also call'd to another, who in Child-bed laboured of an Ulcer in her left Hip; the Flesh was corroded round the breadth of the Palm of a Hand, the whole piece separated and fell off from the Bone, leaving it bare, and the lips of the Ulcer sordid without Inflammation or Tumour. I dressed the Bone with *extract. scordii* dissolved in *spir. vini*, and the Ulcer with *mundif. Paracels. cum Merc. præcipitat.* Traumatick Decoctions, Balsamicks, Cordials, Opiats, Juleps were prescribed, and our work went on successfully a while: the Bone exfoliating from the edges; and the lips of the Ulcer digested and incarnated with Sarcoticks *myrrhæ, aloes, sarcocollæ, cum syr. de ros. siccis.* But in the while a vehement pain seized the other Thigh, and it apostemated. We opened it on the out-side, and felt the Bone carious: we gave vent to a foetid Matter. I treated it as hath been said in the former Observation: the Matter daily poured out, and the Abscess grew more hollow. To add to her affliction, she was tormented with a pain in her right Shoulder and in her left Knee, so that she was necessitated to lie upon her Hips, which exasperated them. At length the great discharge of Matter and extremity of Pain wasted her, Oedematous Swellings arose in her Legs and Feet, and she languished and died.

A young Gentlewoman was Brought-to-bed in the Country, and, being ill Delivered, became indisposed with a Fever, and was pained in several parts of her Body. I found her grievously afflicted with corrosive Ulcers lying deep in the Flesh to the Bone: whole pieces of Flesh separated from the Os Coccygis, and came off, leaving the Bones bare as that of a Skeleton. The Flesh also fell off in round pieces from some other parts of her Body. Upon the left-Side, a little below her Breast, whilst I was with her, I saw it begin with a round crack in the Skin, the compass of a Five-shilling-piece in Silver, without Inflammation or Swelling, or other Matter than a little Sanies. It penetrated deeper every day, and in three or four days fell off from the *Periosteum* that covered the Ribs. I was much at a loss what to dress these Ulcers with while they were cracking, for they were dry and without tumefaction of the lips. What the actual Caustery might here have done, I do not know. I sprinkled *Merc. præcipitat.* in some places, and in others *alumen ustum* mix'd with *Præcipitate.* I fomented some of them with lenient Decoctions, as *rad. althææ, consolid. fol. malvæ, sem. cydon. psyllii*, and the like. Others I treated with decoct. *absinth. rutæ, scordii, centaurii, cardui benedict.* made in a Lixivie; and Cataplasms were accordingly applied: but nothing check'd them. After the Skin and flesh were separated, the remaining lips look'd as flesh perboil'd; yet they afterwards digested, and became better-condition'd: but this Creature had so many places of her Body diseased, as she had not one free part to lie on. Our whole endeavours (after she was dress'd) were, how to contrive Pillows to give her ease. The Woman's work was to quilt them several ways, and make this and that part hollow suitably to the case: some parts of the Pillows had to that purpose holes cut in them. Many ways were proposed,

posed, but all to little purpose. She was always restless, frequently removing, and roaring for ease. I being quite tired, Mr. *Newman* a Chirurgeon was sent for, and relieved me. I soon returned again, and stayed till I grew diseased my self, and with much difficulty returned home; then another Chirurgeon was sent thither: and before I recovered of my own Sickness, I heard that she died most painfully.

CHAP. VI.

Of an Erysipelas.

Description.

AN *Erysipelas* is generated of a hot *Serum* in the Blood, and affects the superficies of the Skin with a shining, pale, red or citron colour, without Pulsation or circumscribed Tumour, spreading from one place to another. It begins, for the most part with some little Rigour, and is continued with a Fever.

Differences.

This *Serum*, according to its several degrees of recess from its natural state towards that of *Choler*, doth produce several Diseases. When the Recess is less, and the sharpness of it but little, then it doth only cause a reddish Blush upon the Skin: from which the name of *Erysipelas* is, or at least may be, derived; which is therefore by some great Authors reckoned amongst the sanguineous Tumours, because its colour represents Blood. But what will they then say of an *Erysipelas* that appears yellow, as most of them do? why should not this colour give it a new name from *Choler*? But I shall in this submit to the Minds of others. However, I dare adventure to add, that a farther progress towards acrimony maketh an *Herpes*; and if the access of acrimony be very great, it maketh an *Herpes exedens*.

These Tumours are not always simple, but do usually mix themselves with other Humours, and from thence get additional Epithets; as *Erysipelas Oedematodes*, *Phlegmonoides*, *Scirrholdes*, &c. But that which I propose to treat of, is the *Erysipelas à Sanguine bilioso*, from cholerick Blood, which affects only the outward Parts, none of which escape its tenuity and subtileness, the Face, Head, Breast, Back, Emunctories, Thighs, Legs and Arms: nay, when Bones lie bare, (and so become, as it were, external Parts exposed to Air) they are also subject to the same Malady; as we too frequently find in Wounds of the Skull, and other Fractures.

The Humour it self simply considered is very thin and sharp, much affecting the Pores of the Skin, in which it usually lodgeth; and in a great measure oweth its confinement thither to an occlusion of them, they being covered with a *Cuticula*, whose density hinders transpiration, from whence pain and redness arise, and often-times other Humours are invited thither; so that the Tumour enlargeth, and becometh compound. Whilst it is simple, the Skin only is the seat of it, or the *Periosteum*, or a Bone that lieth bare: when it is compound, it will affect the Flesh also, and other neighbouring Parts.

Causes.

The Matter of this *Erysipelas* is already described to be a thin cholerick Humour. The Fountain of it is the Blood, which by its capillary Arteries dischargeth it upon that Part, as often as in bilious or malignant and pestilential Fevers it is provoked thereunto. And this, if the discharge be sufficient, is called *Critical*: if it be not sufficient, but that Nature, having discharged part of the Matter, lieth down under the rest, we call it *Symptomatical*. So also when it appears in the beginning of a Fever, it is then reckoned as a Symptom thereof.

thereof. Sometimes the Fever is vulgarly esteemed a Symptom of it, viz. when the *Erysipelas* is first taken notice of, as if it had preceeded the Fever: whereas indeed there is no *Erysipelas* that hath not a Fever, either visible or latent, going before it.

External Causes do also concur to the production of an *Erysipelas*; as Contusions, Fractures, and such like; also the heat of the Sun, Fire, sharp Medicaments, &c. all which have this effect in cholerick Bodies, where the Blood being turgid with that Humour, meets with any occasion of separation of Parts. External Causes.

The *Signs* of an *Erysipelas* are, a shining yellowish colour mix'd with red here and there, vehement heat, with a pricking pain blistering the Skin, and creeping from one place to another. How it differeth from a *Phlegmon*, may easily be discerned by comparing them: This lieth scattering in the Skin, scarce raising a Tumour; whereas the *Phlegmon* lieth deep amongst the Muscles, with elevation and circumscription, and is of a deep red colour. Signs.

A simple *Erysipelas* is not accompanied with cruel Symptoms: there is a Fever, but that diminisheth as the *Erysipelas* encreaseth, according to an Aphorism of *Hippocr.* When the Matter is sent from within outward, the *Viscera* are relieved, and the Patient recovers. This we see frequently in great Diseases. But *ab exteriori introredire malum*, the sudden return of the Humour inward is a bad sign, ill Symptoms frequently following, yea, Death, especially if the Emunctories were affected. Suppuration in an *Erysipelas* is not good, according to *Galen* in his Commentaries on the same Aphorism, speaking of malignant *Erysipelas*, which in suppurating do for the most part corrupt; as we see by the discoloured *Pustula* which arise about them. Also an *Erysipelas* upon a bare Bone is ill; and if a *Delirium* happen, the hope is less. That *Erysipelas* which goeth off by Transpiration, is best. Prognostick.

In the Cure of an *Erysipelas*, you are to consider the Habit of body: for whilst it abounds with bilious Humours, there is no admitting of Repellents; and by Discutients you will encrease the Heat, and consequently the Disease. Therefore we proceed in the Cure of this (as hath been said in a *Phlegmon*) by Diet, Pharmacy, and Chirurgery.

Their Diet ought to be, as in hot Tumours, very sparing; Grewels, Pannadoes, and Chicken-broth, with cooling Herbs: their Drinks, Ptisans, Barley-cream, Emulsions, and Juleps made of distill'd Waters, as *aqu. borag. endiviae, acetosae, lactucae, portulacae, &c. cum syr. e succo citr. limon. granat. rub. idaei, violar.* and the like; avoiding Wine in these Diseases. The Ancients allowed only Water; and to weaker stomachs, Beverage. Rest and Quiet of Mind is here to be desired, and the Belly to be kept soluble. noitub

Concerning Phlebotomy, there hath been much dispute amongst Writers; but they all agree that the Patient be let blood, in case the *Erysipelas* flow upon Wounds, and such-like accidents, or where it affecteth the Head or Throat. In the former of them it is allowed to prevent a *Phrenitis*, which otherwise might ensue; and in the latter a Squinancy, in which there is danger of suffocation. But if the *Erysipelas* be simple, and but in the Skin, we are then by Purgations only to evacuate the redundancy of Humours, and prevent the ebullition of Choler. The Purgatives ought to be lenient, such as have been prescribed in a *Phlegmon*; as *castia, tamarinds, manna, cremor. tartar, rhabarb, &c.* in Whey, or in Decoctions of Barley and opening Roots, with Syrups *e cichor. cum rhabarb.* and *de rhabarb. de ros. solutiv.* also the *Elect. lenitivum, diacathol. diaprun. e succo ros.* Clysters are also most proper in these Diseases. Having thus emptied the Bowels, you may make Revulsion by Friction, Cupping, &c. and by Vomit, if the *Erysipelas* be in the neather Parts.

In your applications to the Part affected, you are to consider whether the *Erysipelas* was from an Internal Cause, or External; also whether it be great or little. If it arise from an External Cause, you may safely apply Refrigerants without any preceding Evacuation, because the Disease took its original meerly from the disaffection of the Part, whether it was from the scorching heat of the Sun, sharp Medicines, Contusion, or Fracture, &c. and not from the peccancy of the Humours. Therefore in such cases you are obliged to appease the pain in the first place by lenient and cooling Medicaments.

If from an Internal Cause, then evacuation by Purgatives is always to precede, unless the *Erysipelas* be remote from the principal parts, or that the heat affecting the Member be vehement; in which case you shall not insist upon Evacuation, but apply the milder Refrigerants to contemperate the Heat, and afterwards proceed in Evacuation of the bilious Humours.

Caution.

But if it be in the Head or Face, you are then to be cautious in your Applications, (Abstinence or a very slender Diet being the best remedy to begin with) and to forbear to treat the Parts affected till the *Erysipelas* have a while made its progress, and in some degrees spent its heat. But if something must be done to satisfy the Relations and By-standers, let the Topick rather be of an exsiccant quality than repellent, lest some ill accident ensue.

We shall begin with an *Erysipelas* proceeding from External Causes. The Medicaments generally prescribed in such cases, are of a cooling humecting quality, not too much astringent, lest you dry the Skin, and prohibit Transpiration, and the Humour included become sharp, corroding the Parts, or stir up Apostematation. The Simples are, *umbilicus veneris, polygonum, plantag. trifolium palustre, portulac. psyllium, sempervivum, solanum*. The Compounds are of various sorts: *R. cerussæ ℥viij. lithargyr. auri ℥iv. mucilag. sem. psyllii, cydon. extract. in aq. solani, succi solani, umbilici Vener. an. ℥iij. aceti cochl. iv. ol. ros. & myrtill. an. ℥ss. sevi vitulini ℥iv. coq. ad succor. consumpt. deinde adde thuris pulv. 3x. ceræ q. s. fiat Ceratum.* Ceratum Galeni is also proper in these, so is unguent. nutritum, with a third part of Populeon. Linen dip't in any of the aforesaid Juices may be applied: but then they must be renewed as often as they dry; otherwise they may encrease the Heat, and excoriate the Part.

Caution.

They who do use stronger Repellents ought to be careful, lest in repressing the Inflammation, they do extinguish the natural Heat of the Part, or strike the Humour inward upon the Viscera.

In the *Erysipelas* proceeding from Internal Causes, decoctum salviæ, with a Solution of Castle-soap, is a good Fomentation; and ceratum Galeni applied after it is sufficient. In those which are critical, a Cerote of *ol. olivar. cum cera alba* hath hitherto served my purpose. If the Heat be vehement, I renew the Application daily; otherwise every other day sufficeth: and as the Blisters arise, I cut them, to prevent Erosion. If afterwards they do excoriate, I dress them with unguent. tutiæ, or the following Unguent upon Pledgits of Lint, by which the serous Humour may be imbibed, and the Ulceration healed. If a Fomentation be necessary, that of *Olibanum* and Myrrh decocted in Wine may be used: *R. troch. alb. Rhaf. & tutiæ pulv. an. 3℥ss. plumbi asti 3j. camphoræ 3ss. cerussæ 3iss. ol. ros. 3vj. sevi agnini 3iij. ceræ alb. q. s. fiat Unguentum in mortario plumbeo per duas horas agitatum.* This will cicatrize them. In those of the Head, *Ætius* proposeth *nidum hirundinis pulv. & cum melle mixtum*. He anointed the *Erysipelas* with a Feather, and delivereth it to us as a Medicament drying without any repelling quality. The Decoction of Coleworts is also commended to bath them. But, unless there be great Excoriation, it will be safer to leave the Cure of such *Erysipelas* to Nature, and evacuate and contemperate the Heat by internal Medicaments. Nor ought

we to be over-forward in our Applications to the Face, or Parts about it: yet in my Practice I have commonly used *aq. calcis* with *ol. lini* well shaken together, with good success; as also these following, where I thought more Exiccation necessary. Take distilled Vinegar in which hath been boiled a piece of *Lithargyr.* or *minium*; after it is settled, pour off the clearest of it, and filter it; put some of this into a glass, and add *ol. ros.* to it, and shake them together. Or, in case of present use, take *saccharum saturni*, and beat it up with the said Oil. Either of these applied with a Feather twice or thrice a day will serve your purpose.

The Accidents which attend *Erysipelas* are the same as in a *Pblegmon*, and do happen through the unseasonable use of Repellents: therefore when you see the Heat go off, and the Skin relax, or when the Patient feeleth himself eased of that burning and pricking pain, forbear the use of your Repellents, and apply Resolvents and Discutients, to corroborate the Part, and restore it to its natural tone. For though the *Erysipelas* do not arise with any circumscribed Tumour, yet in its progress the Member is swelled, and remains so after the *Erysipelas* is breathed forth, and for want of Discussion, doth frequently become œdematous. Therefore to prevent that, it may be reasonable to foment the relaxed Parts with *decoct. summitat. absinth. flor. cham. sambuci, ros. rubr. &c.* in Wine, with an addition of Brandy. If an Emplaster be necessary, *R. farinæ fabar. orobi, an. ℥iv. sem. fœnug. ℥j. flor. sambuci, ros. rub. an. ℥i℥. pulverizentur, coq. in hydromelite ad consumptionem humiditatis; deinde adde ol. anethi & cham. q. s. fiat Emplastrum.* But if the *Erysipelas* terminate in a hard Tumour, *R. rad. althææ, lilior. an. ℥i℥. sem. lini & fœnug. an. ℥ij. coq. in brodio capitis vervecini, & extrahatur mucilag. cui adde ol. ex pedibus bovinis, pingued. gallinæ, ol. amygd. dulc. an. ℥ij. adip. agnin. & vitulin. an. ℥i℥. medullæ ℥ij. lithargyri aur. ℥iv. cera q. s. fiat Ceratum.*

Correcti-
on of Ac-
cidents.

A Person of Quality labouring under some indisposition of Body, and apprehension of a Fever, was by her Physicians Advice let blood about ℥viij. in the left Arm. The second day after she felt that Arm pained, but most about the Bend of it near where the Vein was opened. I looked upon her Arm, and saw it was spread with a burning heat of a palish yellow colour, mixed with red here and there: the Skin was tense and shining, also rimped and blister'd down from the Bend of the Arm to the Hand; from the Elbow to the Shoulder it was of an inflamed red colour. The whole Arm was swelled by the influx of the Humour. This *Erysipelas* was thrust forth by the strength of Nature, and possibly it might be invited thither by the Bandage. However it were, the Patient was relieved thereby; she acknowledging her self more affected with the pricking and burning heat in her Arm than any Sickness: yet she was not without some Fever. I thought it not safe to be too busie with Repellents in this case: for though I might thereby have prevented the encrease, and cured it sooner; yet her Fever might have been by that means augmented, and her Recovery hazarded, she being then with Child. Therefore I resolved to give way for the Humour to spend it self by Transpiration: to which purpose I fomented with a *decoct. Salviæ* with Castle-soap dissolved in it, and the while made a Cerote of *ol. olivar.* and Wax, and applied it in several pieces upon the Arm, with Bandage to retain it on; during which, her Body was kept soluble with Lenients, and a Pearl-Julep prescribed to refresh her Spirits. Her Diet was Chicken-broth, Grewels, and the like. As the Blisters arose, we snipt them, and to some of the biggest of them applied *unguent. tutiæ* upon Pledgits. During these Applications the heat went off from the Parts it had first affected, and spread up higher to the Breast

1. Obser-
vat.

Breast and *Scapula*; it also affected the Hand and Fingers with Blisters: but the tops of them being cut off, they healed, the Inflammation breathed forth in four or five days after, and she recovered; but by reason of the Fluxion, her Arm was swell'd: For the removal of which, I directed them to foment it with the Decoction prescribed in the method of Cure; by which, with the help of Bandage, it discussed. The roughness of the Skin was afterwards cleared with *Pomatum*.

2. Obser-
vat.

A Youth about seven or eight years old, labouring under a complication of Diseases from his Mesentery and Kidneys, was ordered by his Physician to have a Fontanel made in his left Arm: I made it, and left it well digested. About ten days after, that Arm was over-spread with an *Erysipelas* from the Shoulder to the Wrist, here and there blistered. I threw out the Pea, and dress'd the Ulcer with *unguent. basilicon* and *Præcipitate*, then fomented the Arm with Milk, applying over it *ceratum Galeni* with Bandage. By this I designed to give transpiration to the Part, whilst the Physician did treat the Fever. The next day I renewed the Dressings in his presence; and the Ulcer being somewhat digested, I put in a Pea, by his Advice, and dressed the Arm as before, thereby curing the *Erysipelas* in few days: but the Child remaining indisposed, the *Erysipelas* burst forth again, and was also cured by the same method. Then the Patient was purged, and sent into the Air near *Barnet*, where he drank those Waters, and being thereby relieved, was brought back to his Parents. But within few days after he relapsed, and an *Erysipelas* discharged it self again on the same Arm, with a small *Phlegmon* below the Elbow on the outside. It suppurated, and was opened by a Caustick, and cured according to that Method. The *Erysipelas* was also cured by the Cerote, as before. After this, the Child brake out of the Small-pox, and by the great Endeavours of the Physicians was freed of that Disease; but languished and died soon after. Upon the opening of his Body, a Stone of the bigness and shape of an Almond was found in his left Ureter. We remembered the constant Pain he had in his Back long before the first *Erysipelas*, and thought that might be the occasional cause of all these Maladies, viz. the continuation of Pain caused many reiterated Fevers and Fermentations in the Blood, of which these fore-mentioned Diseases were the effects. A thing not rare in Chirurgery, to find the Small-pox produced by the pain of an Ulcer, as also to break-out after the curing of them.

3. Obser-
vat.

A Gentleman of about sixty years of age, having laboured many years under an *Asthma*, was seized with a pain in his left Side, and a Pleurisie followed, with great oppression in his Lungs, his former accustomed way of discharge by Expectoration being suppressed. Doctor *Jaspar Needham* was sent for. By his Prescription the Patient was let blood ten ounces: *Loboch's* and Pectorals, also opening Apozems, were prescribed, and Venæsection repeated; by which the Patient was relieved. Then a Fontanel was cut in his left Arm; which being digested, the Physician and Chirurgeon were dismissed. A few days after, the Patient relapsed, and an *Erysipelas* thrust out the whole length of his Arm. I was fetch'd, and saw it swell'd, the *Cuticula* vesicated, and shining with a burning heat of a Citron colour from the Fontanel downward, but upward to the Shoulder it was more red. His Friends and himself thought the Inflammation to proceed through default of the Fontanel, as not made in the right place. But that was an error in them: for it was a translation of part of that Humour which affected his Lungs, and was by the strength of Nature discharged upon this Part, to which the too strict Bandage might possibly contribute: there being nothing more ordinary than such discharges upon Fontanels: and it was well for him that it there disbur-
then'd

then'd it self. The Physician and my self concluded it a pure *Erysipelas*, and that it required to be breathed forth: to which purpose I applied a Cerote of Wax and Oil over all the Arm, and put a lesser Pea into the Fontanel, with a Pledgit of *unguent. diapompholyg.* and *Emplast. diachalcit.* rowling up the Arm from the Hand to the Shoulder. The next day, in dressing him, I snipt the Blisters, to let out the serous Humour, which might otherwise have ulcerated the Skin. The day after, observing the Heat to go off, I put in a larger Pea, and dressed his Arm as I did the day before. In two or three days after, the Arm being, as it were, freed of the *Erysipelas*, I fixed the Fontanel, (which he keeps to this day :) but the *Erysipelas* spread to that *Scapula* and *Clavicle*, and so down to his Breast and Back. I dress'd it with the same Cerote, and left him enough of it for his Servants to dress him with: during which, Purgatives were repeated, and he was cured by the application of the said Cerote.

A Person of about sixty-four years of age, of a melancholick dry Constitution, was in the Winter-season taken with a Quartan-Agüe, and after the second Fit was seized with a pain in his left Leg; which encreasing, he sent for me. The Leg was inflamed from the Knee to the Foot: the Inflammation of the Skin was of a more deep red colour than is usually seen in a true *Erysipelas*, it indeed partaking somewhat of a *Pblegmon*; but the Swelling was without circumscription; it was tense and shining, made by a translation of his Agüe: so that by this, if well managed, he was in a possibility of being freed of that. Therefore I proposed by Lenients to moderate the Heat, and breath out the Humour. Having satisfied him, that it was necessary to proceed deliberately with it, I treated it as in the former Observation hath been said, and dress'd it twice or thrice with the said Cerote; and having asswaged the heat and pain in it, I shewed his Servants how to dress it, and gave direction to the Patient in the regulation of his Diet, &c. and took my leave; advising them not to dress it too often, lest upon so doing the Inflammation should go off before the morbidick Matter were spent. From the time the Inflammation was made in the Leg he had no more Fits of his Agüe, and his Leg became well without the application of other Medicaments. Upon the going off of the Inflammation I made him a Fontanel in that Leg, which he continueth still.

A Gentleman of about sixty years of age, of a full Body, with a short Neck, and of a sanguine Complexion, having long laboured under the apprehension of an Apoplexy, his Mouth having some while been a little distorted by a *Paralyfis* of his Cheek and Tongue, was let blood in the Neck about ten ounces. The night after, he was seized with a pain in his right Leg, from his Knee to his Toes, with great Inflammation. For the appeasing of which, a Fomentation was brought him by some Pretender in Chirurgery, and applied with coarse Woollen Stupes, one of which was bound upon his Leg. This Leg growing from that time more painful, I was fetch'd to him; when, taking off the Stupes, I found the Leg exceedingly inflamed and blistered, so that the Stupe sticking in the Sores, had excoriated the Part with great Pain and Fluxion, which drew after it a small *Pblegmon*. There was in this Patient great need of making Revulsion from his Head; but this way by Woollen-Stupes was of too much danger to be continued. I wanted a Fomentation to cleanse and refresh the Part, and, being in haste, caused some Water to be heated, with a handful of Wheat-bran: which being strained, I bathed the Member with a Sponge; then applied *unguent. tutie* upon Pledgits of Lint on the Excoriations, and a Cerote of Wax and Oil over the Leg, and an Anodyne Cataplasim on the Tubercle. These Dressings were renewed daily, till the Accidents were diminished, and the Tumour suppurated. Then I gave
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vent to the Matter, and proceeding by Digestion, made no haste in the Cure, but expected rather that the *Plethora* should be carried off the while by Purgatives, and the Patient relieved in his Head. The Physicians were of another mind, affirming that it would be time enough when his Leg should be cured. I was therefore obliged to hasten: however, I made him a couple of Issues *inter Scapulas*; and having well-near cured that Tubercle in his Ham, I left a Pea in it to keep it open as a Fontanel. Though that Leg was not so fit for it, by reason of the great Inflammation it had labour'd under; yet I thought all little enough for Derivation, and would gladly have continued the Leg more fore: but I obeyed my Order, and left him cured of his Leg.

6. Obser-
vat.

A Gentlewoman of about forty years of age, of a full Body, was taken with Rigour and Fever. After some days, she complained of a pain in her left Shoulder, and a pricking heat in that Arm. I was sent for, and perceived it to be an *Erysipelas* thrusting out: wherefore thinking she might be much relieved thereby, I dissuaded her from applying any thing to it. But the heat and pain encreasing, she was advised to apply some cooling Ointment to it, which was thought excellent for Inflammations. She permitted it; and it did indeed check the Inflammation, but her Fever encreased, with a *Delirium*. She was let blood, cupp'd and blister'd, and all things were done to draw back the Matter; but she died.

7. Obser-
vat.

A Man of about 27 or 28 years old, riding abroad with some Friends in hot Weather, his Body being heated by Good-fellowship, was seized with an *Erysipelas* in his Face. I presently let him blood, and bathed it with a *decoct. salviae cum sapone Veneto*, and left directions to wet his Face often with it: I also directed a Clyster to be given him that night, and a Cordial-Julep upon occasion. In the morning he was hot, and had rested ill, and the *Erysipelas* was spread to his Neck, and affected his left Ear with great pain, and reached up to his Forehead amongst the Hair. I let him blood again, and advised him to keep his bed, and put himself into a Sweat with a draught of Posset-drink wherein had been boiled a little Harts-horn, a few opening Roots, and Marigold-flowers. I also sent him a glass with *aqua calcis* with *ol. lini* beat in it, with direction to anoint his Face with a feather, it being very much heated and swelled: he was also purged with Lenients, some of those which have been set down in the method of Cure. By this method the *Erysipelas* went quite off in ten or twelve days. Then I bathed it with *decoct. malvae, viol. &c.* to bring off the Scurf, and afterwards with Butter-milk, to supple it, and anointed his Face with *Pomatum*.

8. Obser-
vat.

A Gentleman, some years since, very curious and neat in wearing his Hair, was persuaded to permit it to be boiled as it grew on his Head: by which doing, an *Erysipelas* was raised in the hairy Scalp. I let him blood in the Arm, and purged him with Lenients; all things else were done for Revulsion: but by reason of his Hair, there were no applications made to relieve the Part affected; whereupon a Suppuration followed; which put me upon a necessity of cutting it off, and applying Fomentations discutient and drying. I met with much difficulty in curing the Ulcer; but at last it was cured as a corrosive Ulcer, to which I refer you.

An *Erysipelas* arising from an Internal Cause affecting the Head, requires the timely Advice of a Physician, it frequently causing grievous Accidents, as Fever, *Delirium*, &c. and, being subject to great Ulcerations with Putrefaction, doth frequently corrupt the Flesh to the Bone. Sad Instances may be given of these, (they ending for the most part in Death:) therefore it were to be wish'd in such cases, that the Hair be timely cut off, for it contributes much to the Erosion that happens.

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An *Erysipelas* affecting the Face of a Person of Honour, he consulted Sir Ch. Scarborough and other Physicians: they prescribed Bleeding to the quantity of eight ounces, also Clysters and lenient Purgatives to keep his Body soluble. During the time of Inflammation he was feverish and indisposed, also subject to Fainting, and the like. In consideration whereof he was advised to keep his bed, and sometimes to dispose himself to breathing Sweats with the Countess of Kent's Powder: Cordial-Juleps were also prescribed him. The *Erysipelas* shifted from one part to another in and about his Face. They applied no Medicaments to the Parts diseased. In the declination of it I saw it arise again fresh in his Forehead with a Swelling very high, only from the streightness of his Cap: which I taking notice of, and advising it to be slackned, the Swelling sunk again in few hours. I instance this, only to shew how small a thing will raise this disturbance where the bilious Humours are in ferment. As his *Erysipelas* spent it self, they purged him, and he recovered. An *Erysipelas* sometime affecting one particular part of the Head or Face, as the Eye, Nose or Ear, hath given much trouble to the Physician and Chirurgeon in removing it.

It is not many days since I was called to one labouring of an *Erysipelas* on her right Ear. It had been diseased four or five days before I came: it was prodigiously swelled and inflamed; and, by reason of the acrimony of the Humour which was included between the Folds of the Ear, and the Ear and Scalp, there was great Excoriation. I fomented it with *decoct. salvia cum sapone*, dressed it with that Preparation of *acet. litharg. cum. ol. ros.* above proposed in the method of Cure, and left her some of it to dress herself as occasion should offer; then let her blood, and directed a Clyster to be given her. The next day I purged her with Whey and Manna, and repeated it again and again. She lived a few miles out of Town, which put me upon the necessity of committing the Cure of it to themselves, with Directions and Medicaments such as I have above proposed. It dried up the external Heat; but the Fluxion which lay more internally, after all apostemated, and was cured accordingly.

I was called in by my kind Neighbour Doctor Denton, to a Young Woman who had been afflicted with an *Erysipelas*, which had spread over all her Face: it had shifted often: at length she was cured thereof by the said Physician; yet was the right Eye closed with the Inflammation and Swelling from the reliques of that *Erysipelas*, and the lower Lid apostemated, and the Matter was ready to make its way inwardly into the hollow of the Eye. We opened it by Incision, discharging a proportionable quantity of Matter; the remainder of which we digested and dried to a perfect Cicatrice by *unguent. diapompholygos*, discussing the Tumour in the mean while by Fomentations.

CHAP. VII.

Of a Furuncle or Boil.

FURUNCULUS is a painful Tubercle of the bigness of a Pigeon's Egg, with a broad *basis*, arising in a Cone. It is generally call'd a *Boil*, and in its state is accompanied with Inflammation, Pulsation, and Tension.

It proceedeth from a gross vitious blood separated from the rest as unfitable, and is cast forth by the strength of Nature into the external parts of the Body.

Differen-
ces.

It differeth as it is greater or less, and as it affects the Skin, or lies deeper in the Flesh: it is also accounted malign, or benign. Those that are more deep partake of the nature of a Carbuncle, and are mistaken for such, but are not of so adust or corrupt a Humour. *Furunculus* differeth also from a Carbuncle, in that this cometh to Suppuration, which the other never doth.

Signs.

A *Furuncle* is in its beginning round, hard, and inflamed; and as it encreaseth it riseth up with an acute head, and sometimes a Pustule: and then it is more inflamed and painful, (whence ariseth that expression, *As sore as a Boil*;) especially when it arrives at its state, which is about the eighth or ninth day. If the Boil be malign, it is of a black dusky colour: there is also a Fever, and other untoward Symptoms, and a thin *Sanies* issueth from it; and if it doth digest, it is with much difficulty.

Prognos-
tick.

Boils are for the most part without danger. The common sort do predict Health, and frequently cure though nothing be applied to them; for they come to maturity and break of their own accord. But when they arise in nervous parts of the Arms or Legs, they affect the neighbouring Emunctory. In the Nose or Ears they are very painful, and vexatious to cure.

Cure.

The Cure consists in the regulation of Diet, and in Evacuation, like as in a *Phlegmon*; only the Application in these ought to be maturative, they always terminating in Matter, and being, as you may perceive by the toughness of the Matter, not capable of Resolution.

The Maturatives are, *rad. & fol. althææ, malvæ, rad. lilior. uvæ passæ, ficus*, and all the Emollient Gums, *galbanum, ammoniac. &c.* The Compounds are, *Empl. diachyl. cum gummi, de meliloto, tripharmacōn de mucilaginis*. In the extremity of pain you may assuage the heat with this or such like: *R mucilag. sem. psyllii, althææ, lini, an. ʒiſs. far. bordei ʒij. ol. lilior. axung. gallinæ, an. ʒj. butyri recent. ʒſs. croci ʒj. cum vitell. ovi fiat Cataplasma*. When the Tumour is broken, deterge that tough Matter with *mundif. ex apio*, and apply this or such-like Cerote over the Tumour: *R sevi cervini & vitulini an. ʒiij. axung. anseris ʒj. terebinth. ʒiſs. cera q. s. fiat Ceratum*.

1. Obser-
vat.

IN a Man of about fifty years of age, of a healthy strong Body, journeying to London, a Boil rose upon his Wrist. He applied to it an Emplaster of Shoemakers-wax. When he came to me it was hard and inflamed. I dress'd it with the above-said Cataplasma, by which it suppurated. As the Pustule fretted off, a hot *Sanies* issued forth in a small quantity. I dressed the Pustule with *unguent. basilic. cum vitell. ovi* upon a Pledgit, and continued the application of the Cataplasma over all. The next day I took off the Dressings, and found the *Cuticula* cast off, and the acute end of the Boil red, and a thick white Matter sticking in it. I dressed it as before, and the second day after again, and saw the Cone or head of the Boil broken off, and that thick tough Matter lying in it; which Matter likewise appeared round about through the several Eruptions it had made. I dress'd it with *mundif. ex apio*, and applied the Cerote *Sevi cervini* over it. The second day after, I found the Openings broke one into another, and the tough Matter sticking in them as in a Honeycomb. At that time the Ulcer was near as broad as a Half-crown. I continued the Mundificative and Cerote, and dress'd it every other day. As this tough Matter digested out, it incarnated underneath, and contracted, and healed as fast, and cicatrized by the application of *unguent. tutiæ*, leaving little scar, and no hardness, behind it.

2. Obser-
vat.

Some years since I was sent for, early one morning, to a Gentleman about forty years of age, who was extremely pained with a Boil on the outside of his left Thigh. I pulled off the Emplaster, which was of *galbanum*, and
saw

Chap. VIII. Of Epinyctis and Terminthus.

43

saw the Boil was in its state, and ready to break. It was much inflamed, and the Pustule was of a livid colour. I dress'd the Pustule with *ol. ros. cum vitell. ovi*, and applied over the inflamed Boil an Emplaster of *basilicon*. I returned that night, and dress'd it with the Cataplasim above prescribed; by which it suppurated, the *Cuticula* brake off, and a thin *Sanies* with some little Matter discharged. As the Boil came more to maturity, the Pustule or Head brake off, and made way for the Matter to digest out: and accordingly the Ulcer cured. An Empirick, angry that his Medicaments were thrown off, and mine applied, complained to a Person of Honour, whose Family I then attended, that this Gentleman laboured under a Carbuncle or Plague-fore: but I cleared my self to that Person, and shall shew you, in its proper place, that a Carbuncle is another kind of Boil.

A Gentleman near seventy years old was sorely afflicted with a *Furuncle* ^{3. Obfer.} within his Nostrils, and about his Nose, with great Inflammation and hardness. I fomented the diseased Parts with *decoct. summitat. althææ, malvæ, viol. flor. chamæm. meliloti, sem. lini & psyllii*, and with a Syringe injected some of the same liquor into his Nostrils, and applied the foremention'd Cataplasim over his Nose. I purposed the letting him blood in the Arm, but it would not be admitted by reason of his age: but by setting on Leeches behind his Ears I took away some blood; also by blistering the Neck and Shoulders I endeavoured Revulsion, by Clysters kept his Body soluble, and continued the Applications, by which his Pain was somewhat mitigated. After five or six days the Skin became thin, and a white tough Matter shewed it self in several places within and about his Nose, and gradually made its way through many small Openings. I made it more way here and there with the point of a Lancet, and dressed *cum vitell. ovi & ol. lilior.* and continued the use of the Fomentation, and applied the Cerote. I was much troubled to think what would become of his Nose, the exterior and interior parts being all stuf with that clammy Matter, so that it would not issue out; and, when it should, I doubted it would leave little coverture for the Cartilages. To hasten it out, I daily dropt in a mixture of *mel ros. cum succo apii* decocted; and by conveying a big Tent dipt in the same into each Nostril, I press'd the Matter outward, and sometimes pull'd it away with my *Forceps*. It came out as if it had been broken pieces of the *Spinalis medulla*, and burst some of the Openings into one another; which I was sorry to see. But the Matter not being accompanied with acrimony, the hollowness filled up, and the distended lips falling near one another, agglutinated as the Matter digested out: and by the compression I made with my Tents within the Nostrils I enlarged them, and furthered the well cicatrizing of the Ulcer; which was infected in few days after with *Cicatrices* not unseemly.

CHAP. VIII. Of Epinyctis and Terminthus.

THERE are yet two sorts of painful Tubercles which I have met with in my Practice; they are taken notice of by the Ancients under the names of *Epinyctis* and *Terminthus*; a couple of angry Pustules affecting the Skin in the Arms, Hands and Thighs. They do not differ much one from another, so may well be entred together.

The *Epinyctis* is of the bigness of a Lupin, of a dusky red, and sometimes of livid and pale colour, with great Inflammation and pain. It dischargeth

Descrip-
tion.

first a *Sanies*, then a bloody Matter. *Terminthus* is somewhat less, of a blackish colour: it breaks and gleets, and within a day or two the Pustule separates, and comes away in a Slough, and from that time it digests and heals.

Cause. They both proceed from an excessive heat in the Blood, but are without malignity or danger, and cure with little difficulty, if there be no error committed in Chyrurgery.

Cure. The Cure consists in Evacuation by Bleeding, Purging, and regulation in Diet, &c. as in a *Phlegmon*.

The external Applications commended to us by the Ancients, are *sol. cicuta*, *folan. plantag. cum polenta*; or, *B. uvas passas mundatas, & contusas superpone*: and to wash them with *aqua salita*, to dry up the Matter, and prevent Erosion; afterwards to dress them with a mixture of equal parts of *sulphur viv.* and *spum. argenti cum vino*. I never was consulted in these till they were arrived at their height, and then found Anodynes of most use, and applied such as have been prescribed in the former Chapter, and afterwards healed them with *unguent. tutia*.

1. Observat. of an Epinyetis.

A Maid came recommended to me with the former of these Tubercles on the inside of her Arm, of the bigness of the greater sort of Lupins, of a livid colour, with a small acute Pustule rising up in the middle of it. It was accompanied with great Inflammation, affecting the Tendons with hardness in the Joint. I prescribed her that Cataplasim *ex mucilag. sem. psyllii, althææ, lini, &c.* as in the Chapter of *Furuncle*, and embrocated the Tendons affected with *ol. ros. & cham.* By this the Tubercle was brought near Suppuration, the Pustule first brake, and discharged a thin *Sanies*. I dress'd it *cum vitello ovi*, and about two days after the Tubercle it self thrust out a bloody Matter. I dress'd it with *unguent. basilic.* added to the *vitell. ovi*, and applied *cerat. dialthææ*, and continued the Embrocation. The Matter from that time was daily better digested, and the Pain diminished: it was healed with *unguent. diapompholyg.* and *Empl. è bolo*.

2. Observat. of an Epinyetis.

A young Gentleman having such another on the outside of his Wrist, was recommended to some body who opened it by Incision: but from that time it became more exceeding painful. He came to me with it hard and dry, and it had communicated its anguish all along by the Tendons and Nerves to that *Axilla* with several Glands. I embrocated the Arm from the *Axilla* to the Knuckles of that Hand with *ol. ros. cum aceto*, and applied *Empl. è bolo* upon those Glands. To the Tubercle I applied *unguent. basilic. cum ol. ros.* spread indifferent thick in the form of an Emplaster, and dress'd it so twice a day. I purposed the next morning to have let him blood; but he was easier: and the same night I felt the Tubercle softer, and saw a bloody Matter thrust out. From that time it digested better, and the Accidents diminished: in four or five days after the Glands relolved, and the Ulcer cured by the application of *unguent. tutia*, &c.

3. Observat. of a Terminthus.

Of the latter sort, there arose one in the Knuckle leading to the Fore-finger of a Gentlewoman of about forty years of age. An old Acquaintance of mine call'd me to the sight of it. It was a small Tubercle inflamed round its *basis*, having a black head, and a long inflamed streak passing from it to a Fontanel which she had on that Arm. Whether it did run upward from the Pustule to the Fontanel, and affect it, or descend from it to the Pustule, I know not: however it was, there were marks of communication from one to the other, and both were painful, and the Patient was indisposed with a Fever. In the Fontanel there was a small Orange-pea, which I cast out, and

put

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put in a common one, and dress'd it with Lenients, and an Emplaster to retain them on. I dress'd the Pustule with *unguent. basilic. cum vitell. ovi*, and applied the fore-mention'd Cerote prescribed in *Furuncle*. It suppurated the next day, and the head of it cast off in a Slough. I clipp'd off the loose Skin from it, and dress'd it with *unguent. tutiæ*, and in five or six days cicatrized it. During the Cure, the Patient was afflicted with a *Diarrhœa*, which was purged off. After which, she was hot and feverish, and troubled with a *Rheumatismus*; for which she was let blood, and cured.

CHAP. IX.

Of Inflammatory Tumours of the Glandules.

UNDER this Head I comprehend all those Tumours of the Glandules which have Blood for their essential ingredient. They are usually reckon'd *Phyma*, *Phygethlon*, *Bubo*, *Parotis*. It is true, that *Strumæ* and *Scrophulæ* do sometimes partake of Blood, and become *Phlegmonoide*, &c. but that is not essential to them: witness the great numbers that never come to inflame or suppurate.

OF those that are essentially Bloody Tumours, though few of them pure *Phyma*. *Phlegmons*, *PHTMA* is the first; which is an Inflammation affecting the Glandules under the Jaws: I mean the Conglobate Glands; viz. neither the internal salivary, which is *Ranula*; nor the external, which is *Parotis*. The name of *Phyma* is also given to the *Phlegmonoide* Tumours in and about the *Anus*, because of their near resemblance to Glandulous Tumours, if they be not really such.

They are caused by a mixture of impure Blood with *Pituita*. Children are most subject to them; and in them they are hastened by their wearing of Stays, a way to keep their Head-cloaths on.

The Tumour is round and hard; in time of Suppuration it inflames, and is accompanied with Pulsation, Tension, &c. as in a *Phlegmon*, but doth sooner suppurate.

They have been taken by some for *Strumæ*: but they differ from a *Struma*, which, being contained in a *Cystis*, doth require to be eradicated by Escaroticks after Suppuration and discharge of its Matter; but these, after discharge of Matter, are cured either of themselves, or by the ordinary intensions of Digestion, &c. They are without danger, and easie of Cure.

The Method of Cure is the same with that of the little *Phlegmon*: only these do not admit of Repellents; but from their very beginning must either be discussed, or brought to suppurate. And indeed, all that I have ever seen did terminate by Suppuration. In the beginning we treat them with *Empl. diachyl. cum gummi, de meliloto*, and the like: or, in case of Pain, with maturative Cataplasms, as hath been set down in *Phlegmon* and *Furunculus*; as *rad. althææ, lilior. sem. lini, psyllii*, &c.

A Gentleman fetch'd me one night from my house to see his only Child, about a year old, labouring of one of those Tumours under the right Jaw: it was round and hard, of a pale colour, and was supposed the *King's Evil*. I applied *Empl. diachyl. cum gummi*; and instead of the Stay, put on a folded Linen-cloth about it, to retain the Dressing. After three or four days I visited the

the Child again, and saw the Tumour red; tending to Suppuration. I then dressed with *unguent. basilic.* and a Plaster; and the third day after, feeling the Tumour well suppurated, opened it by the milder Caustick, and discharged a Matter of good colour and consistence. I dress'd it with Lenients, and after separation of the Escar disposed it to incarn by the common Sarcoticks, and by the use of the Vitriol-stone; and afterwards with *unguent. de lithargyro* cured it in few days.

2. Obser-
var.

Such another, but bigger, was that in a Girl of about nine years old, where Doctor *Rugely* was the Physician. She had been diseased with a Fever, and some reliques of that Matter discharged themselves in a Swelling under the right Jaw as big as a Pullet's-Egg. It was suppurated, and required vent, which I gave it by Incision; but could not cure it till I had applied a Caustick upon the depending Part. The place not being very capable of Bandage, it could not be treated so advantageously when opened by Incision, and dressed with Tents: but after the laying it more open by Caustick, the Matter plentifully discharged, and the Abscess cured as the former. Many of these have been brought to me, upon suspicion of the *King's-Evil*: some of which my Servants have cured, by my Directions, after the abovesaid manner. You will meet with more of this Tumour in the Treatise of the Diseases of the *Podex*.

Phygeth-
lon.

Diffe-
rence.

Cure.

PHYGETHLON is a Tumour affecting the glandulous Parts under the Jaws, and is call'd *Panus*. It differeth from *Phyma*, in that it hath a mixture with *Bilis*, as the other had with *Pituita*, and lies round and flat as a Cake under the jaws.

It is cured after the same manner as the other; so will not be worth the troubling the Reader with many Instances of it. I shall give you one, whereby you may distinguish it from *Phyma* and other Tumours.

Observa-
tion.

A little Girl was brought to me, upon a supposition of having the *Evil*. She had a flat, hard, round Tumour lying under her Chin and part of the right Jaw down towards her Throat; it was of a yellowish red colour, not unlike that in an *Erysipelas*, but without Vesication. I directed one of my Servants to make a Cataplasm *ex rad. lilior. alb. &c.* by the application of which it suppurated in three or four days, and discharged a well-digested Matter; during which the hardness resolved, and it cured in seven days by the only use of that Cataplasm.

Bubo.

Differen-
ces.

Causes.

THE Tumour call'd *BUBO*, is an Inflammation of the Glandules in the Emunctories of the Groin or Arm-pit.

It taketh its Differences from the quality of the Humour: and so they are either benign, or malign. The latter sort are either Venereal or Pestilential.

The Causes of *Bubo* are Internal or External. The former are vicious Humours abounding in the Blood or in the Nerves, excreted sometimes critically, sometimes symptomatically. The external Causes may be Pain affecting the exterior Parts: so a Wound in the Hand or Arm, nay, the Finger, will affect the Arm-pit with a Tumour. You have an Instance of it in *Phlegmon*. A Cancer in the Breast doth the same. So an Ulcer in the Foot affects the Groin. In the Treatise of *Struma* you may see some Instances of it.

Observat.

A Fontanel in the Leg distemper'd with Pain, caused a swelling of the Glands in *Inguine*. I was consulted about the Swelling, and, enquiring of the reason of the sudden Tumour, found the Fontanel disturbed by walking much that day. I dress'd the Fontanel with Lenients; and the Tumours of the

the Glands in *Inguine*, which were risen like so many *Scrofulæ*, relaxed, and were scarce to be felt the next day.

A *Bubo* ariseth in the Emunctories with Pain, Inflammation, Hardness, &c. Signs as in a *Phlegmon*. If it was made by *Crisis*, then a Fever preceded : If there were none, then other Causes must be enquired after ; as, whether Pain preceded in some remote Part ; also whether it be pestilential, or venereal.

Buboes that are neither malign nor contagious are not dangerous, if they suppurate kindly, and are timely opened : but if the contrary happen, they may degenerate into *Fistula*, and then are not without danger. If they proceed from a translation of Matter, (as sometimes from the Parts near the head of the *Vena cava* and top of the Breast, or bottom of the Neck, into the Arm-pits, or from the lower parts of the Belly in the Glands and other Parts near the *rami iliaci* in the *Inguina*) the Cure is difficult : and if the Lungs above, or the *Uterus*, or Bladder, or *Rectum* below, partake in the Tumour, it is more desperate.

A *Bubo*, according to the usual method of Practice, ought not to be repelled : therefore, in order to the Cure, you are to consider the Cause ; and if it were by *Crisis*, you are either to breath it forth by Discutients, or hasten Maturation. If the *Crisis* be imperfect by reason of the weakness of the expulsive faculty, you ought by Attraction to help it forward, either by Cupping-glasses, or by the application of soure Leven, Black-soap, *sterc. columbin. sem. sinapis, urticæ*, Figs, roasted Onions, &c. Or, *℞ cepam magnam, excavetur, & impleatur cavitas theriaca ; deinde papyro involuta coq. sub cineribus calid. & cum ol. scorpion. fiat Cataplasma, addendo fermenti acer. ℥ss. Misc.* Or, *℞ Empl. diachyl. cum gummi ℥ij. picis Burgund. ammoniac. solut. an. ℥ss. pulv. aristoloch. rot. rad. gentianæ, an. 3j. cum ol. scorpion. fiat Ceratum.* All the hot Gums are hereto proper. But if it be Symptomatical, it betokeneth *Plethora*, which ought to be removed by Bleeding. Purging is also necessary, both to carry off the quantity, and also to amend the evil quality of the Humour ; *Plethora*, in this case, being usually Cacochymical : yet must not our Purging be too violent, but only such as may assist Nature in making a due separation of the peccant Humours from the mass of Blood. And if it was caused by Pain from some other Part, you ought by Lenients to assuage that Pain, and by moderate Discutients mixed with Repellents scatter that Humour in the Emunctories. But if it will come to Suppuration, you shall hasten the Opening of it, and digest, incarn and cicatrize it, as is said in the general Chapter of *Abscesses*, and will be shewed in the following Observations.

A Man of about fifty years old, of a full Body and strong Constitution, ^{1. Obser-} was taken with a Pain under his right Arm, with Hardness and Inflammation. ^{vat.} I was sent for ; and, concluding it a *Bubo* thrust forth by the strength of Nature, applied *Empl. diachyl. cum gummi*, designing not to dress it again till it was near suppurated : but the Tumour encreasing with great Pain and inflamed Redness, I was put upon a necessity of applying Anodyne Cataplasms. Within few days after, it being suppurated, I opened it by Incision, and discharged a well-concocted Matter : then dressed it with *unguent. basilic. cum vitell. ovi* upon a Tent, and applied an *Empl. diachyl. simpl.* malaxed with *unguent. dialthææ*, and afterwards dress'd it with *mundif. Paracels.* Having so disposed it to heal, I left Dressings, and after three or four days visited the Patient again ; when observing the hardness digested off, and the Abscess fit to cicatrize, I left off the use of the Tent, and dress'd it with a Pledgit of *unguent. diapomphol.* and the Cerote over it, and left them wherewithal to finish the Cure. But in a few days after they sent for me again. I found it swell'd,

swell'd, and the Matter issuing from it thin and foetid, much more in quantity than I could expect. I enlarged the opening by Incision, and there came forth a Tent which in his Servant's dressing had slipt into the Abscess. From that time the Matter lessened, and the Abscess cured without relapse by the method aforesaid.

2. Observat.

A married Wife, of about thirty-four years of age, having been long diseased with Hysterical-Fits, with a complication of other Maladies, after many unsuccessful attempts, was put into the hands of Sir Fr. Pr. who prescribed *Merc. dulc. ʒj. in conf. cicborii*. The second Dose salivated her sixteen or seventeen days, whereby she was relieved for some months: but then she complained of a Pain in her left Groin; which growing bigger, and raising the Parts about it into a Tumour, she embrocated it, by my advice, with *ol. lumbric*. After a few days, the Tumour more encreasing with Inflammation and hardness, I applied *Emplast. mucilag.* with a third part of *Empl. diachyl. cum gummi*. The fourth day after, feeling the Tumour suppurated, I opened it by a Caustick, and discharged a proportionable quantity of Matter well digested: then dress'd it with Lenients, to hasten the separation of the Escar. While the Escar was separating, a long streak of Red appeared stretching down from the *Inguen* along the middle of the Thigh toward the Ham: I embrocated it with *ol. ros.* and applied *cerat. Galeni*. The next day I felt Matter in it, and saw the inflamed Streak stretch lower down. I applied a little of my milder Caustick upon the upper part of it, which was about three fingers breadth from the Tumour in *Inguine*, and gave vent to a little digested Matter, dressing it with Lenients. This while the Abscess in the Groin was in good temper, and disposed to heal: but the aforesaid inflamed Streak passed down to the Ham, and so along the *Musculus gastrocnemius* to the great Tendon of it which leads to the Heel, and had Matter in it the whole length. In less space than four days I made Apertions in it in five several places, all by Causticks: the lowermost in the lower part of the Calf of the Leg. These discharged the Matter, and were cured in few days (after the Escars were separated) by the use of *unguent. tutiæ*, and the like.

After some months she was seized with Convulsive twitches, which she observed to arise from the lower part of the Calf of that Leg that had been affected with the Apostemations, and in the same place where the Matter before terminated. Upon which consideration the Physician prescribed a Fontanel to be made in the very Part; which accordingly I made, and kept open by a Pea, with an Emplaster and Laced-stockin: by which means she was freed of her Fits, and enjoyed a tolerable measure of Health a long time after.

So a Lady labouring under such-like Fits, which began on the outside of the *Os tibiæ* near the Shin, was cured by making a Fontanel in that place, when other Remedies failed. She continueth it to this day, I suppose.

In another we made a Fontanel between the Thumb and Fore-finger; and in another in the Breast; and in a Child behind the Ear: those Fits beginning there.

Parotis.

Description.

Cause.

PAROTIS is a Tumour in the Glandules behind and about the Ears, generally call'd the Emunctories of the Brain; though indeed they are the external Fountains of the *Saliva* of the Mouth, as modern Authors do agree.

The immediate Cause, is the Blood offending in quantity or quality, as it hath admixture with the Ferment of the Part, or with other Humours. It also happeneth by external Cause, as Bruise or Wound, whereby Blood is extrav-

extravasated, and cast out into these Glands behind the Ear on one side or other, making a Parotid Tumour.

They differ according to the Humour, and manner of generation. To the Difference. Humour ; as, whether the Blood be mixed with Choler, Phlegm, or Melancholy. To the manner of generation ; and so a *Parotis* is a Symptom of a Fever, or a *Crisis* of it. Those Fevers be usually malignant that cast out such Tumours : but sometimes a *Parotis* riseth simply.

The *Parotis* is known by the Part it affects with Tumour, Pain and Inflammation, as having generally a great proportion of Blood mixed with other Humours, according as they are predominant. If it be Malign or Pestilential, there is Fever joined with it. Whether it proceeded symptomatically or critically, the time of the Disease and Signs may demonstrate.

A *Parotis* without a Fever is less malign or dangerous than that which arises with one. They are also less dangerous which attend long Fevers, than those which follow acute ones. Those which are thrust forth by a *Crisis* are salutary, and easily cured : but those which happen after great Evacuations, or Fever, without remission of it, are pernicious and dangerous. Those which break forth symptomatically, and arise from vicious ill-disposed Humours, are of difficult Cure, and dangerous.

In the Cure of this Tumour, you are to consider whether it be symptomatical or critical, or of what kind of Matter generated.

If it be critical, and come out kindly, the business is then by Lenients to mitigate the Pain, and further Suppuration ; as hath been said before in *Bubo*. But whether it be symptomatical or critical, with little or much Tumour, malign or benign, you ought not to use Repellents, lest thereby you return the Matter from without inward. If the Inflammation be great, and the Accidents high, and Blood abound, let it out, evacuating the Humour by lenient Purgatives, regulating the Patient's Diet, temperating the Humours as in *Phlegmon*, and embrocating with *ol. lumbric. chamæm. &c.* But if, through any defect, Nature do not thrust the Tumour out as you would, you may further it by Cupping-glasses and Attractives, as in *Bubo* hath been said. Or if the Matter be crude and viscid, you may apply powerful Discutients and with Emollients if you fear induration. But if after all it tend to Suppuration, then further it with Suppuratives ; as, *R. rad. lilior. cepar. sub cineribus coctar. an. ℥iv. mucilag. sem. lini, ℥i℥. far. tritic. ℥iij. axung. porcine, unguent. basilic. an. ℥i℥. vitell. ovor. ij. croci ℥ij. fiat Cataplasma.* The Matter concocted, you are to give it vent, and proceed in the Cure, as hath been said in the former Chapter of *Bubo*.

A Child aged about three years, by accident of a Fall, was seized with a Dizziness, and some twitches of a Convulsion. A Fontanel was made in the Neck, and a Vesicatory applied *inter scapulas* : but the Child was not thereby much relieved. A Tumour afterwards thrust out behind that Ear. I made a Fontanel under it, and derived the Matter thither, and thereby the Child recovered.

In Concussions and Fractures of the *Cranium* these Tumours are frequent, and are discussed by *ol. cham. &c.* or the Matter may, as hath been said, by a Fontanel thereunder be happily spent.

The Perspiration of these Parts is to be regarded ; for the checking of it hath caused Convulsions, yea Death, in little Infants.

A Gentlewoman aged about thirty years, of a strong healthful Constitution, was taken one night with a Pain behind her right Ear ; it encreased, and became very troublesome. After three or four days she sent for me. The Pain affected

affected the Temporal-Muscle with Heat and Tumour, and her Head with Twitchings, and frequent Startings. She kept her bed, and was faint and weak: she had neither purged nor bled. I felt her Pulse small, which I judged to be rather from oppression than weakness, there being no considerable cause for the latter. I persuaded her to be let blood, which with some unwillingness she yielded to. I open'd a Vein in her right Arm: the blood flowing out in a full stream, and being serous, I took away ten ounces; then embrocated the Tumour with *ol. cham.* warm, and dipt Wooll in it, and applied it upon the Part affected. A Clyster was given her some hours after; and an Emulsion prescribed her, of which she drank a good draught that night, and repeated it at pleasure. The Pain continuing, a Cataplasm was applied *ex rad. lilior. fol. malvæ, violar. flor. cham. sem. fœnug.* made up with a few crumbs of White-bread, Saffron, Yolk of an Egg, and *ol. sambuci*; the Parts being first fomented with some of the Decoction, and part of the Liquor cast in with a Syringe: Wool also was dipt in the same, and put into the Ear. By these Applications an Apostemation discharged it self thereout; yet the Tumour did not much slacken. Therefore I purged her with an Infusion of *sena, rhubarb. &c.* in which was dissolved Manna, and *syr. ros. pallid.* whereby she was somewhat relieved. A day or two after I purged her with Whey, Manna, and *Crem. tartar.* and afterwards repeated it: the Tumour discussed, her *Menses* came down, and she recovered.

3. Obser-
vat.

I was sent for to a Child of about two years of age diseased with a large Tumour of an oval figure, hard and inflamed, under the right Ear. I embrocated the Tumour with *ol. lilior. & cham.* and directed a Cataplasm to be applied of a few *malvæ & viol.* with the Crumbs of a White-loaf boiled in Milk, and made up with *axung. porcin.* Yolk of an Egg, and a little Saffron. And the day after, calling there again, and seeing the Tumour hard, I advised a Lily-root to be roasted under embers, and beat up with the remaining Cataplasm: by which in two or three days it suppurated. I opened it by Caustick, and discharged a well-concocted Matter, and in few days after cured it by Digestion, &c.

4. Obser-
vat.

Amongst the many diseased People that came to me at the publick Healing in November 1673. there was a Child of about two years of age diseased with a hard inflamed Tumour lying round behind the left Ear. I directed one of my Servants to apply an *Emplast. diachyl. cum gummi* malaxed with *unguent. dialthææ*: and the fourth day after, feeling it suppurated, we opened it by a Caustick about half an inch long in the declining Part, and gave vent to a well-concocted Matter. From that time it was dress'd with *unguent. basilic.* in the form of a Cerote. Thus the Hardness was resolved, and, as the Matter discharged, the Abscess healed within a few days, with little or no pain or trouble: whereas if it had been opened by Incision, it must have been kept open by a Tent, and been rendred more painful and slow of Cure. After the Escar separated, a Pledgit of *unguent. diapompholygos*, and a touch sometimes of the Vitriol-stone deterged, incarned, and cicatrized it.

5. Obser-
vat.

An old Gentleman, a Servant to the King below stairs, brought his Son to me, an infirm Youth of about thirteen years of age, having a large Tumour behind his right Ear arising from a crude Matter. It had been of some years growth. I applied *Emplastr. ad strumas cum stercore columbino*, to discuss it; but it heated: whereupon I applied a Cataplasm, one of the Suppuratives above-mention'd, and concocted it; then opened it by Caustick, and discharged a mix'd crude Matter. The Ulcer being fordid, I laid it more open, and dress'd it with *mundif. Paracelsi*, with *alum. usk.* and *Merc. præcipitat.* and dress'd

dress'd the Eſcar and incised Lips with Digestives. After the separation of the Eſcar, I deterged the Abſceſs more powerfully by the uſe of the Vitriol-ſtone and Precipitate, and afterwards incarnated by the common Incarnative uſed in ſuch caſes, and cicatrized it ſmooth without any remaining hardneſs; and the Youth enjoys his health well ſince.

A Perſon of about fifty years of age, having long laboured under Scor-6. Obſer- butical affections, was ſeized with a ſlow Fever; his Head was affected with Vapours, and his Spirits oppreſſed: during which, a Tumour aroſe behind his left Ear, and reach'd down under that Jaw, growing big and hard, of a dark-red colour. We endeavoured by diſcutient and emollient Cataplaſms and Embrocations of various ſorts; but it would not yield to any of them. We repeated Venæ-ſection, and made him Fontanel *inter ſcapulas*; Purgations were alſo repeated: but without ſucceſs. I then applied an *Emplaſt. ad ſtrumas*, and continued it without removal the ſpace of fix or ſeven days, ſuppoſing thereby the Tumour would ſuppurate or reſolve: yet it continued hard amongſt the Muſcles. I repeated the uſe of the Emplaſter; and the third or fourth day after, feeling the Matter fluctuate under it, I took off the Emplaſter, applied a Cauſtick on the depending Part about an inch in length, divided that Eſcar, and gave a diſcharge to a crude ſerous Matter; then dress'd it with Lenients, and applied *Emplaſt. de mucilag.* with a third part of *diachyl. cum gummi.* After ſeparation of the Eſcar, I deterged with the Vitriol-ſtone and *baſilicon* and *Merc. præcipitat.* and at other Dreſſings dipt them in *pulv. præcipitati.* Having thus deterg'd, I incarnated, and by Epuloticks cicatrized it firm. During the while, he was often purged, and Traumaticks and Antifcorbuticks were preſcribed: but a Hardneſs remained notwithstanding. Whereupon, doubting a Recidivation, I applied another Cauſtick the length of that Induration; and, having thereby penetrated deep into it, divided that Eſcar to the quick: and by ſeparation of the Eſcar, and digeſtion of the lips of the Ulcer, that Hardneſs was breathed forth, and the Patient cured, and enjoys a good health to this day.

CHAP. X.

Of a Carbuncle.

A CARBUNCLE is a round hard Tumour ariſing ſomewhat like an angry Boil, of a dark-red colour, accompanied with the highest circumſtances of Pain and Inflammation, with many *Ulcuſcula* round about it, never coming to digeſtion till it hath corrupted the Part which it ſeizeth, ſo that the whole Piece cometh away, if the Patient recover.

It oweth its *Original* to a very high Degeneration of the Blood into a *Original* Humour that is of a cauſtick quality, which ſuddenly ariſing ſeizeth the Part and corrupteth it, burning it, as it were to a coal, from whence it hath its Name.

The *Causes* of theſe Degenerations of the Blood are divers. The moſt uſual *Causes* is a peſtilential Infection. But it is not ſeldom found that the Humours of ſome Bodies do corrupt into ſo great a degree of virulency, as to cauſe ſuch a Tumour when there is no appearance of a Plague. Hence it is that they are divided into peſtilential, and not peſtilential; which diſtinction hath reference more to the antecedent Cauſe than to the Tumour it ſelf,

Signs.

Therefore it is, that, let the Carbuncle be of which sort it will, the Symptoms attending it are much alike; viz. *Nausea*, Vomiting, Dejection of Appetite; *Tremor*, Palpitation of the Heart, frequent Swooning; *Delirium*, &c.

The Pestilent is distinguish'd from the Non-pestilent by the greatness of the Symptoms, and the Infection that is in the Air.

Prognostick.

A great Carbuncle is more dangerous than a small one, and the Black is more pernicious than the inflamed Red one. Those that are in the Emunctories, Throat, or near any principal Part, have more of danger than those that are seated remote in the Limbs, especially in the muscous Flesh. The most dangerous Symptom of all, is the return of the Matter of the Carbuncle into the Blood again.

Cure.

In the Cure of a Carbuncle, two things offer themselves to our consideration: 1, the Antecedent Cause, the over-heated corrupt Blood abounding in the Body; 2, the Conjunct, or the Humour affecting the Part, and making the Carbuncle.

In order to the first, a regulation in Diet ought to be observed, and the hot Blood fermenting in the Body to be evacuated by Venæsection, especially in those that are not pestilential, and that to fainting: but in the pestilential it is judged not so safe, lest thereby the malignity be drawn inward; but if you do let blood, it must be in the beginning, whilst the Body is strong to bear it. And forasmuch as Bleeding scarce evacuates all the depraved Humours, therefore Purging is prescribed; lest, by the abounding of corrupt Humours, the native Heat should be extinguished. But in pestilential Carbuncles there is also a Caution required upon the same consideration as in Bleeding: therefore we content our selves with Clysters and lenient Purgatives, as *manna*, *castia*, *electuar. lenitiv.* *diaprun.* and the like; and proceed in resisting the malignity by *Alexipharmaca*, viz. *theriaca*, *Mithridat. elect. de ovo*, *confect. alkerm. de hyacintho*, &c. The Heat of the Blood may be tempered by *syrup. è succo citr. limon. acetos. borag. buglos. &c.* Or, *R. conf. borrag. buglos. lujulæ. an. ʒij. spec. de hyacintho ʒj. cort. citr. conditi, nucis moschat. an. ʒiij. cum syr. è succo citr. fiat Electuarium.* After a morsel of which, a draught of such-like Julep may be drank and repeated once in four hours: *R. aquar. scordii, dracont. citr. an. ʒiij. spec. de hyacintho ʒj. aq. theriacalis ʒiij. syr. è succo citr. q. s. Misce.* Also Epiphemata may be made *ex aquis melissæ, ros. damasc. borrag. nymphææ, cum aceto sambucin. rosac. &c.*

In treating the Carbuncle as it relates to the Conjunct Cause, you ought to consider the strength of the Patient; and if it be not likely to thrust forth kindly, you are to endeavour by Attraction to assist Nature in the bringing it outward, by the application of a such-like Cataplasim: *R. summitat. rutæ Mij. fermenti acris ʒij. fœcus vet. num. viij. piperis albi ʒij. salis com. ʒiij. Misce.* Or that Cataplasim proposed in the Discourse of *Bubo*, *ex theriaca cost. in cepa excavata.* And, if there be occasion, Cupping-glasses may be applied to help it forward. But if the Body be strong and plethorick, and the Carbuncle thrust forth with raging Heat and Pain, then that Cataplasim prescribed by *Galen*, *ex foliis plantag. pan. tritic.* decocted in Wine, may be of good use, it being by him commended to have the virtue moderately to repress the Heat, and to digest. Others have proposed an Emplaster of Plantane-leaves, Galls, Lentils, and Wheat-bran, beaten up with Vinegar; and having thus mitigated its Heat, they endeavour Suppuration.

But I never saw a true Carbuncle suppurate: therefore if the aforesaid Medicaments avail not, I advise the scarifying or cutting deep into it, to give a breathing to the Humour; then dress it with some Escarotick that may resist its malignity, *troch. Andronis, polyidæ.* Some Authors have proposed the

the Caustick. Without doubt, the Actual Cautery timely applied on some of them would save the Patient much Pain, and shorten the Cure: for the malignity being thereby consumed, the Escar might without much difficulty be digested, the Heat about the Carbuncle alleviated the while by one of the above-mention'd Cataplasms, and the Ulcer cured by the common Method. But I refer this to the Consideration of the Chirurgeon; and shall give you an Instance of a Carbuncle, to confirm what I have delivered.

IN the time of the last great Plague, a Person of Honour, about sixty years ^{i. Obfer-} of age, of a gross body, and highly scorbutical, was after dinner seized ^{vat.} with a Rigour and Vomiting. His Physician, Sir Francis Prujean, being out of Town, he sent for me. I suspecting it to be the beginning of some malign Fever, desired to be excused, his Condition requiring rather a knowing Physician than a Chirurgeon: but I was afterwards fetch'd by a more powerful Messenger, and found the Patient in his bed, vomiting, and in a burning Fever. I advis'd the giving him *Carduus Posset* to further his Vomiting; during which, I sent for a mixture of *theriaca Veneta* & *conf. Iujula*, and a Cordial-Julep of *aq. dracon.* &c. as it is above set down in the method of Cure; of the former I gave him a morsel, and some of the Julep after it, and advis'd his Servants to repeat the use of them once in four hours. He rested very disquietly that night, but in the morning I found him more calm. I let him blood, and directed a Clyster to be given that afternoon. As I was taking my leave of him he desired me to look upon his Back, it being very sore. I supposed his Fontanels (which he had long continued *inter scapulas*) were uneasy; and, making way to look upon them, I found his Malady four fingers breadth beneath the right Fontanel. It was a dark-red Swelling, about the bigness of a small Chesnut, lying very hard between the musculous Flesh and Skin, with many small white Wheals about it of the simple *Herpes*. I was somewhat surprized at the sight, and dress'd it hastily up with *unguent. basilic.* and retired to my house to make ready that Cataplasm of *Galen's*, which I soon after applied, and continued the use of it some days: during which, the Carbuncle encreased in breadth and hardness, the *Ulcuscula* also spread round it. Upon which consideration I applied the suppurative Cataplasm above-mention'd, to endeavour Maturation; and on the *Ulcuscula* and Parts about, *unguent. nutritum*, to calm the burning Heat. The Patient's Body was kept soluble by Clysters and lenient Purgatives; the Cordial-Electuary and Julep were also frequently repeated; and his Diet was Broths, with Wood-forrel and such-like Contemperatives boil'd in them. Nevertheless the Fever continued, and the Patient lay dozed and somewhat delirious, as also troubled with a *Singultus* and *Aphtha*. Observing him daily more indisposed, and the Carbuncle encreasing in bulk, and not likely to suppurate, I scarified deep into it, wash'd it with a Solution of *theriaca Veneta* & *mel Egyptiac.* in *aceto vini*, then fill'd the Incisions with *pulver. troch. polyda*, and applied a Cataplasm over all *ex farina orobi* decocted in Oxymel. By the use of these Applications the *Ulcuscula* dried, and the Carbuncle gleeted, but, by the use of Lenients, it digested after a few days; and as the Escar separated, a well-concocted Matter discharged in great quantity daily more and more: yet the separation of the mortified Carbuncle had left a very large Opening, and there appeared no considerable Swelling whereby one might judge the Cavity large. But feeling the Parts about, and pressing my hand upon the right Clavicle and under that *Axilla*, the Matter poured out abundantly; yet these Parts were not inflamed during the growth of the Carbuncle. This put me upon a necessity of making an Incision proportionably; and cutting of the flapping Lips to prevent the retention of Matter,

Matter, I then dressed the Abscess with *mundificat. ex apio*, and the tender Lips with the common Digestive *ex terebinth. cum vitello ovi*; and applied a Cataplasm *ex farina hordei, fabar. flor. ros. rub. &c.* decocted in Oxymel, with Compress and Bandage. We had often proposed the consulting a Physician, but those of his Acquaintance were out of Town. Accidentally I met with Doctor *Tho. Cox*, about the twentieth day, near the Patient's house, and prevailed with him to visit this Person. He saw the Abscess dressed, and the Patient labouring under the *Singultus* and *Aphthæ*, also so dozed as he scarce spake to the Physician. He prescribed the Patient Cordials, and what else he thought necessary, and left several Prescriptions for the Family. Until then they suspected not the Disease; though the Servants that wash'd his Linen brake out in Blanes on their Hands and Arms as far as they were in the Soap-suds. From the time I made that large Opening the Matter lessened, and the Cavities healed up by agglutination, the Ulcer incarned, and was cicatrized by the common Epuloticks.

2. Obser-
var.

The same year I was fetch'd to a Child at Nurse in *Westminster*, that had been some days sick of a Pestilential Fever, during which a Carbuncle thrust forth in the right Breast, a little below the Clavicle, of the compass of a broad Shilling; but it was then sunk, and of a black colour. I divided it and gave vent to a bloody *serum*, and saw the Flesh underneath it sound: it was without Inflammation. I dressed it up with warm Digestives, and applied an Emplaster of Mithridate on it; then gave it some *Elect. de ovo* dissolved in a spoonful of *aq. theriacalis*. I came too late, for the Child died a few hours after.

CHAP. XI.

Of a Paronychia.

Descrip-
tion.

PARONYCHIA, so call'd by the *Greeks*, is a small Swelling about the Nails and ends of the Fingers, known amongst the *Latins* by the name of *Panaritium*: by the Vulgar People amongst us it is generally call'd a *Whitflaw*.

Names.

Differen-
ces.

There are two sorts of *Paronychiæ*: they both affect one and the same Part, and are frequently taken one for the other, but are very different in their Symptoms. We shall distinguish them by the names of *benign*, and *malign*. The former rise superficially under the *Cuticula*, and come suddenly to Suppuration: whereas the *malign Paronychia* lieth deep amongst the Ligaments and Tendons, and is slow in coming to maturity. I suppose it is that which is commonly call'd a *Felon*.

Causes.

The *benign*, or milder Species, takes its original from a bilious hot *serum*: the other is commonly said to proceed from Adustion in the Blood, with a mixture of Choler or salt Phlegm.

Signs.

Paronychiæ may truly be reckon'd amongst the Inflammations, they arising with great Pain and burning Heat, with Pulsation and Tension. The *benign* comes soon to maturation, and may be discerned by change of Colour in the *Cuticula*, the Matter appearing under it as in a Blister.

The *Signs* of a *malign Paronychia*, are an intense vehement Pain deep amongst the Ligaments and Tendons, with Fever, Fainting, and a slow Suppuration.

The

The *Prognostick* may be made by what hath been delivered of them, *viz.* ^{Prognostick.} that the *benign* cometh soon to Suppuration, and is as easily cured: the worst danger that can happen it is but a loss of the Nail.

The other, which lieth deep, is of a malign quality; and, if it be not speedily removed, will corrupt the *Periosteum*, rot the Bone, and soon extend its putrefaction to the next Joint, and threaten the welfare of the Hand.

In the *Cure* of *Paronychia* Authors generally make no distinction: They ^{Care.} propose evacuation by Bleeding, and the observance of a slender Diet, as in ^{The Method of the Ancients.} a *Phlegmon*. Concerning Topicks, they commend Repellents in the beginning of the Fluxion, but not with much astringency, (unless as Intercipients upon the Parts above) lest the Matter should thereby be impacted in the Part, and corrupt the Bone: yet the Medicaments they then prescribe do all partake of that quality; as, *R. ol. ros. & myrtill. cum succo solani & bol. Armen.* and, *R. gallas virides cum aceto mixt.* Others mix Lenients with them, as that of *succ. solani, plantag. portulac. umbilic. Vener. mucilag. sem. psyllii, cum dictis succis vel aceto extract.* to which they add *bol. Armen. gallas & champhor. cum ol. ros. & myrtill. and unguent. alb. popul. &c.* Others mix Discutients with Repellents: as that of *Paracels. galla cum melle mixta*; or, *R. ol. mastich. ol. olivar. matur. an. ʒj. antimonii crud. ʒss. thuris ʒiij. resin. pini & cerae, an. q. s. Misce*; or that *sulphuris vivi, fuliginis, allii, sal. com. sem. carui, an. p. æq. Misce.* In case of Pain, *R. fol. malvæ, hyoscyami, rad. althææ, sem. psyllii, lini, sænugræci*: and these are the Suppuratives, of which divers others are prescribed by them. All which are proper in the *benign Paronychia*, as they are set down, and some of them may be applied to the *malign* one in its very beginning; but while you endeavour Suppuration in it, the Bone will certainly corrupt. Therefore if the Pain go not off by the first Applications, give breathing to the Humour by cutting deep into the Part most affected, and then dress it by such-like Lenients as follow: *R. sem. lini, sænug. pulv. an. ʒss. mucilag. sem. psyllii ʒj. vitell. unius ovi, croci, an. ʒj. pingued. galinæ aut butyri recent. q. s. fiat Cataplasma.* Or, dress it with *unguent. basilic.* by which the Wound will cure, if the Humour hath not altered the Part: if it hath, proceed as shall be shewed in the following Observations.

I shall begin with the *benign* or milder Species, commonly call'd a *Whitflaw*. It is a Disease so common, that I think there is none but knows what it is, and how to cure it. Yet I shall give you two or three Instances, the better to distinguish it from the other.

A Child of about four years of age was brought to me whilst I was dressing a Patient in a Noble Family. The Child was pained with a small red Swelling about the inside and root of the Nail of one of the Fingers. I applied a little *cerat. Galeni* upon it. The second day after, I found the Matter shine under the Skin, and the Swelling lie like a Blister about part of the Nail. I opened it, as I had often seen the common People, by passing a Needle through the Skin: it discharged a thin yellow Matter, and by two Dressings with *unguent. basilic.* it cured. *Paronychia benigna.*
1. Observat.

Such another I met with in the Finger of a Friend, lying upon one side of the Nail. I opened it with a Lancet, and after the discharge of the Matter, pared away that side of the Nail, and dressed the Blister with a Pledgit of *unguent. turicæ.* Himself cured it with some of the same in two or three days. 2. Observat.

A Gentleman came to me, not long since, with one of these very large upon the pulp of one of his Thumbs; it lay like a great Blister. I let it out with my Lancet, and dressed it up with *unguent. basilic.* and gave him some of the same to cure it. 3. Observat.

Another

4. Obser-
vat.

Another I saw lie under the fore-part of the Nail and Finger, very painful for the while, but it quickly suppurated by Lenients. The Matter being let out, and part of the Nail cut away, it cured in a few days. But when this happens in scrophulous Children, or where acrimony abounds, the Cure is vexatious enough: but it doth seldom corrupt the Bone, nor is the Pain considerable, compared with that which passes under the name of a *Felon* or *malign Paronychia*; of which I shall now give you some Instances.

Paronychia
maligna.
1. Obser-
vat.

A Gentlewoman came to my house one night late, complaining exceedingly of a Pain in the pulp of one of her Fore-fingers. I looked upon it, and felt it hot, but saw nothing of Swelling whereby I could judge it so ill. She seemed ready to swoon'd with Pain. I propos'd the making Incision into it to the Bone, not imagining so fearful a Creature would have permitted it; but she readily assented: whereupon I presently made a Puncture deep in the most pained part to the Bone, and suffer'd it to bleed while I made a Dressing of *unguent. basilicon* to apply upon it with an *Emplast. è bolo*; which being applied, she complained of the smarting of the Wound, but said it was nothing to the pain she felt before. The next day I waited upon her at her Lodging: she had slept well that night, and in perfect ease. I took off the Dressing, and saw the Wound agglutinated, then dress'd it as the night before, and from that time dress'd it no more. After the same manner I have freed many in the beginning of the Disease.

2. Obser-
vat.

A young Fellow attending in a Nobleman's house, was seized with a grievous Pain in the pulp of one of his Fore-fingers, and came to me bemoaning his condition. The Part affected felt hot, but seemed neither inflamed nor much swell'd. I press'd in the point of my Incision-knife into the place where he was most pained, and in the drawing out the Knife enlarged the Wound a little. There seemed to issue out only a little Blood, which I permitted a while to flow, then dress'd it up with a Pledgit of *unguent. basilicon* and an *Emplast. è bolo*. The second day after, I met him, took off the Dressings, and saw the Wound cured: and he said the Pain went off that night he went from me.

3. Obser-
vat.

Another Young Man serving in a Noble Family, was afflicted with a Pain in the pulp of one of his Thumbs, and after three or four days trial of several Applications he was commended to me. His Thumb being inflamed and swelled, I made Incision into it to the Bone: this not only bled, but gleeted a few drops. I dress'd it with Lenients, and rowled it moderately, hoping thereby to agglutinate it. The second day after I took off the Dressings, and, finding the Wound open and undigested, dress'd it up with a Dossil dipt in *Merc. præcipitat.* with Emplaster and Bandage. The third day after I dress'd it again. The Dossil came off with a Slough, and left the Ulcer disposed to Digestion. I dress'd it with a less Dossil spread with *basilicon* and *Præcipitate*, with a Pledgit of *unguent. diapomphol.* and an Emplaster over it. From that day it digested, and cured in six or seven. The occasion of its not healing by Agglutination, as the other did, was from the alteration (I suppose) the *Ichor* had began to make in the bottom of the Wound: which may, I think, enough shew the necessity of laying these Tumours open more timely, unless they have discovered some other way of discussing the Humour; which, I confess, I have not been able to make out, though I have tried many Medicaments commended in such cases. *Forestus*, in his 5th Book and 16th Observation, sets down some *arcana* in the Cure of it: but after the trial of them, we find him foil'd in the Cure of his Patient, and the same Patient cured by another Chirurgeon, by the laying it open, and taking the rotten Bone out.

I shall

I shall now shew you what they are when they have been long treated by Suppuratives, and the like.

A Servant to an Officer of the Court was brought to me sorely afflicted with one of these *Paronychiæ* in his Fore-finger, by the side of the Nail. He had been under hands that had treated it with Medicaments till the Putrefaction within had rotted the Ligaments and *Periosteum*, and bared the Bone of the first Joint, and apostemated it to the third Joint. I laid it open by Incision from the very end of the Finger downwards the length of the Abscess, and dressed it with *Merc. præcipitat.* applying Dossils over it spread with a Digestive to keep the lips of the Wound distended, and with long snips of *Empl. diachalcit.* rowled it up, leaving way between for the Matter to discharge, over which I repeated a moderate Bandage to press out the Matter in the Part, and restrain the Influx, and reduce the Finger to its former shape. The third day I dressed it again, and, finding the Ulcer sordid and over-grown with loose flesh, rubb'd it with the Vitriol-stone, filling the Ulcer again with *Merc. præcipitat.* and dressed it up as before. By this Method I deterged the Ulcer, and with Sarcoticks incarnated it, and by the application of Epuloticks with Bandage cicatrized it, and reduced the Finger to its natural shape, so that he recovered the use of it.

A Lady commended a Poor Woman to me, who brought her Child, a little Boy of about five years of age, grievously diseased of a *Paronychia* on the very end of the Fore-finger, and under the Nail. The end of the Finger was rotted away, and the Bone sticking out bare: the Nail was also rotten, and heaved up by the Putrefaction underneath it. I took hold of the Nail with my *Forceps*, designing to cut it off, (it lying in my way;) but it separated off from the root more easily. I also pinched off as much of the end of the Bone as was naked, rubb'd the loose Flesh and the remaining Bone with my Vitriol-stone, and applied a Pledgit of Lint dipt in a Solution of *tinctur. vitrioli* next the Bone, then fill'd the Ulcer with *Præcipitate*, laying over it an *Emplastr. unguent. è lithargyra* with a moderate Bandage. The third day I dressed it again, and found a separation of the corrupt Flesh: but the Matter was more than I could reasonably expect from such an Ulcer. Whereupon I made a farther search, and found a *Sinus* running the length of the second Joint. I presently made an Incision that length, and fill'd up the Opening with Dossils dipt in Lenients, then dressed the more corrupt Parts with the same Medicaments as before, and rowled it up. The third day after I took off the Dressings, and found the Bone covered with its *Periosteum* in the *Sinus* I had last opened: but it was full of a loose Flesh the whole length. I dressed it as I had done the former; the Vitriol-stone being of great use in these Ulcers which so abound with luxurious Flesh amongst the Tendons: for by it the corrupt Flesh is dried up without offending the Nerves, Tendons, or other sound Parts; and the Ulcer may be deterged, according as it is touched, more or less; and the Bone it self, where it is bare or carious, may be dried by it, and disposed to moulder off. Where the *Hypersarcosis* was great, there I also sprinkled it with *Præcipitate*, whereby I more speedily freed the Ulcer of its Putrefaction; and by the application of long snips of Emplaster rowled about the Finger, I restrained the influx of Humour. By moderate Compression I restored the Finger to its true shape, and by the common Epuloticks cicatrized it, without more loss of the Bone than what I cut off at the first Dressing, the Stump exfoliating insensibly.

Whilst I had the honour to attend the King at the *Hague*, a Woman related to one of the *Princess Royal's* Servants had been lamentably afflicted with one of these malign Ulcers in the Fore-finger of her right Hand; by reason of

the long application of Suppuratives the Bones of the first and second Joint were rotted, and the Putrefaction had spread round, and corrupted their Ligaments. I made Incision the length of the Abscess, and upon farther search feeling the Bones not only rotten, but loose, I took them both out, and separated the Nail from some part of the Ligament to which it adhered; then deterg'd the Ulcer by filling it with Precipitate, dress'd the lips with Digestives, and rowled it up. After I had thus deterged it, and by Compresses and Bandage reduced the Finger to a better figure, I left off the use of Dossils, and by long pieces of Emplaster brought the lips together, and left the Finger well shaped, and a Nail thrust out again; but it, having lost its Supporters, was of little use. Whether afterwards any *Callus* thrust out to supply the place of the Bones, I doubt: but in strumous and some other Ulcers you may see how such defect hath been recompensed.

7. Observat.

Some years since I was fetch'd into the City to a Gentlewoman who was much afflicted with one of these malign Uleers in the very first Joint of one of her Fingers. The Chirurgeon that attended it had been suppurating it, but the while the Bone corrupted. I propos'd the laying it open by Incision, and to have proceeded by Deterfion. She assented to it, and accordingly it was laid open. After a Dressing or two I left it to the Chirurgeon. But about ten days after she sent for me again, and was much unsatisfied in the proceedings. I looked upon it, and, seeing it was likely to be a tedious and an unsuccessful work, advis'd the cutting off of her Finger: which, after some deliberation, she submitted unto.

8. Observat.

The Wife of a Bit-maker attending the Court, whilst we were at St. *Johnston's* in *Scotland*, was seized with a Pain in the end of her Fore-finger, and desired my Advice. I told her the nature of the Disease, and shew'd her the necessity of making a Puncture with an Incision-knife into the pained Part: but she went murmuring away from me, and made use of some other, who endeavour'd to suppurate it. In the while I made her a Visit or two, to persuade her from that method; but she would not permit me to open it. Some while after, the Putrefaction being encreased, it made its way out, and discharged some of its *Sordes*. This they call'd Suppuration, and promised themselves a speedy Cure, censuring me for advising her to open it before Maturation. But in these Abscesses the Suppuration is false, and rarely happens till the Bone and Ligaments are corrupted: which after a while she finding too true, made friends to me; at whose desire I visit'd her, and found the Finger miserably swelled, and the Ulcer fordid, the Bone lying rotten in it. I dress'd it with Deterfives, and offer'd to her consideration, whether she would permit the Ulcer to be cut open, (for Causticks are of ill use in Ulcers with *Caries* in these Parts,) and dress'd it with such Medicaments as might cleanse it, and dispose the Bone to exfoliate, which would be a long work, and uncertain; or that she would without more delay permit it to be cut off, and thereby have it speedily cured. After some demurr, she submitted to the latter; and I cut it off with a Chisel, dress'd up the Stump with *pulv. Galeni cum albumine ovi*, and roll'd it on. The second day after I dress'd it *cum terebinth. & vitell. ovi*, &c. and digest'd it; and afterwards I incarn'd it with the common Sarcoticks, and cicatrized it in few days with *unguent. desicc. rubr.* and Pledgits dipt in *aqua calcis*. She gave me a great many good words for the ridding her of such a painful Finger, but never forgave me the neglect (as she call'd it) of dressing it with Suppuratives; she supposing that I could have so cured it, but would not. It was a crime which might be the easilier forgiven her, since we meet with it so often in some of our own Profession.

CHAP. XII.

Of Pterygion.

PTERYGION is an Excreſcence of Fleſh about the Nails of the Fingers or Toes. A *Whitſlaw* ariſing about the Nails, is often the *Cauſe* of this Diſeaſe in the Fingers: it is alſo cauſed by ſome Bruiſe of the Fleſh under or about the Nails. Sometimes an Excreſcence ariſeth from the root of the Nails, by reaſon of ſome Puſtule that preceded; in which caſe the Membrane underneath is often concerned.

It happeneth alſo in the Toes, through ſome Bruiſe or preſſure of the Nail, eſpecially where the Nail is thick and hard, as ſome over-grown Nails are, whence Pain and Inflammation is ſtirred up, and an eruption of Matter followeth, which being exaſperated by a continual pricking or preſſure of the Nail, the Ulceration ſpreads and corrupts it, and thruſts out Excreſcences and looſe Fleſh round about. When this happeneth in poor People, who travel much in the wet and dirt, and want that accommodation which is neceſſary to keep their feet dry and clean, the Matter corrupts the Tendons and Bones; as I have frequently ſeen amongſt our common Soldiers in the time of the Civil Wars, and amongſt ſome of the poor People that come out of the Country in the time of publick Healing, to be Touch'd for the *King's-Evil*.

They take their *Difference* from the Cauſe, and Part which they affect: ſome riſing ſuperficially in the ſides of the Nail with eroſion; whereas others, ariſing from the Tendons, corrupt the Bones, *Difference.*

The *Signs* are evident, *viz.* the Ulceration and Excreſcences appearing about the root or ſides of or under the Nails with pain. If it affect the Tendons or Membrane under the Nail, the pain is more vehement: if the Bone be corrupted, the putrefactive Smell will diſcover it. *Signa.*

In the *Pterygion* affecting the Skin there is no great difficulty of Cure: if the Nail be pared away, the Ulceration will ſoon heal. But if it ariſe from the Tendons or Membrane at the root of the Nail, the work is more hard; and in Old People, or Bodies ill-habited, it is apt to gangrene. *Progn.*

In the *Cure* of the ſuperficial Ulcerations with looſe fleſh ariſing about the Nail, you are in the firſt place to cut away the Nail, that you may apply your Medicaments to the Ulceration, which may conſume or dry the looſe fleſh and cicatrize it: in which caſe you may uſe a little dry Lint, or Lint dipt in *aq. calcis* and dried, or *pulv. cort. granat. balauſt. terr. ſigillat. lap. tutiæ*; in ſtronger habits, *Merc. præcipitat.* You are to avoid the application of moiſt or greaſie Medicaments, for they rot the Nails, and encrease the Ulceration. The Excreſcences ariſing from the Tendons or Membrane at the roots of the Nails, require Medicaments more powerfully drying; ſuch as are *æs uſtum, ſquammæ æris, calx viva, troch. polyidæ, Andronis, Muſæ*; yea, the Cauſtick-ſtone warily uſed, *Merc. præcipit.* and the Vitriol or Alume-ſtone, may ſerve to cicatrize the Ulcer. *Cure.*

A Young Lady having bruised her Fore-finger accidentally, and neglected the Cure, it corrupted under the Nail, and became very fore. I was ſent for, and found the inſide of the Nail looſe, the Skin at the root of the Nail raiſed up, and full of ſpongy fleſh. I preſently cut away the ſide of the Nail, to give diſcharge to the Matter; then dreſſed it up with dry Lint, and applied a Pledgit of *unguent. tutiæ* over it. The Excreſcence riſing from the root of the finger, *i. Obſervat. Of Excreſcences about the Nail of the Fore-finger.*

Nail I dressed with *Merc. præcipitat.* and laid a Pledgit of *unguent. tutie* over that Swelling, with a snip of *Emplastr. diachalcit.* as an Intercipient, and rolled it up. The Ulceration on the side where I cut the Nail away cicatrized by the foresaid Dressings; but that at the root of the Nail I found swelled; the Precipitate had crusted the loose flesh, and stopped the Matter in. I scraped it away, and filled the Ulcer again with the same Precipitate, and applied a Pledgit and Emplaster over it, as before. The second day after I dressed it again, and found it more hollow, the loose flesh coming away in a Slough. I then left off the use of the Precipitate, and applied a Pledgit of *unguent. tutie* with an Emplaster, and made a moderate Compression over the Ulcer to unite the Cavity, and thereby agglutinated it in three or four Dressings, and cicatrized the lax edges with the Alume-stone and dry Lint. This Nail being cast off, a new one thrusting forth restored the Part to its natural figure. From such Ulcerations at the roots of the Nails there often arise great Excrecences, especially from the Thumbs, and are extremely painful, and difficult to cure.

2. Observat. Of an Excrecence on the Thumb-nail.

I was sent for to one who was grievously afflicted with such an Excrecence: it was as big as a Cherry-stone; it was hard and gleeted, and the Parts about it much inflamed. I applied a snip of Emplaster between the Excrecence and the Nail: then I rubbed the Excrecence with a Caustick-stone, and with an armed Probe dried up the Salt as it dissolved in the working. After I had consumed the Excrecence, I wash'd out the Salts in the Escar with a little Wine warm, pull'd away the snip of the Emplaster which I had laid to defend the Nail from the Caustick, and cover'd the Escar with Precipitate, applying a Pledgit of *basilicon*, and an *Empl. è bolo* over it. I dressed it the next day, lest the gleet should offend the Nail; but I found it dry, and the Patient ease from an hour after I had last dressed it up. I continued the use of Lenients, and, after the Slough separated, rubbed the remaining root with Vitriol-stone, covering it with Precipitate again; and afterwards, by dressing it twice or thrice with Precipitate, dried it up.

3. Observat. Of the Nail of the Great-Toe.

A Gentleman, having lain some while under Physick and Chirurgery for an Ulceration about the Nail of his Great-Toe, consulted me. I saw the Matter flow round the Nail, yet the Nail was not loose, nor did it seem to press into the flesh; for there had been a Corn-cutter who had cleared it: and in truth I supposed the Matter to arise from behind the root of the Nail, it being there hollow and inflamed. To make farther discovery, I filled all the chinks with *Merc. præcipitat.* and with a dry Pledgit of Lint and *Emplastr. de minio* dressed it up. A day or two after, when we dressed it, we found the Nail over-flowed with Matter, and could make no certain judgment of its original: whereupon we dressed one side with Precipitate, the other with dry Lint, and that behind the Nail with *unguent. diapompholyg.* and thereby it appeared that the Matter arose from behind the Nail. For by this way of dressing, the sides dried; but after we filled that Cavity over and behind the root of the Nail, the Matter burst out under the Nail, and was seen to lie in the sides. Upon which Physick was again proposed, to purge off the naughty Humours: but indeed the Cure consisted in the cutting off that callous Skin behind the root of the Nail. But my Brother-Chirurgeon dissenting, the Patient complied with him, to avoid the Pain. Yet after a farther experiment by dressing two or three days, I prevailed, and with an Incision-knife cut off that callous Skin, then digested it with *unguent. basilicon*, and in as few days cicatrized it: and from that time there appeared no more Matter or Sore.

4. Observat.

A Gentleman of about seventy years of age, having Nails on his Great-Toes very big, hard and crooked, the one of them pressed so streight upon the Membrane underneath it as to make an Ulceration; which encreasing with Putre-

Putrefaction, he came to Town. It seemed to me to be gangrened underneath the Nail; wherefore I presently passed my Knife underneath the Nail, and made a separation of it. The sides of the Nail lay very deep, and in some parts tied fast by its Ligament. It being removed, I washed the Ulcer with Wine; but it bleeding too fast to make any farther judgment of it at that time, I covered it with Precipitate, and retained it on by Pledgits of Lint and Emplaster. The second day after I found it crusted with the Precipitate; but a corrupt Matter bursting through it in several parts, and the Ulcer appearing deep, I took off that Crust, and dress'd it with *unguent. basilicon* mix'd with Precipitate and *alum. ust.* and by Detergents and Epuloticks, as hath been shewed in the preceding Observations, I deterged, and cicatrized it: then causing the Nail of the other Great-Toe to be rasped and cut round, to prevent the like accident, I dismiss'd him.

Sometimes in Elderly People a crude Humour diseases the Tendons and Membranes at the root of the Nail, and through defect of the Natural Heat, corrupts it; and, if it be not timely succoured, a Mortification follows.

A Gentleman of above seventy years of age, complaining of a Sore at the root of the Nail of one of his Great-Toes, was commended to my care. The Ulcer was crude, and had corrupted the Flesh and part of the Ligament. I dress'd it up with *Merc. precipitat.* with a Pledgit of dry Lint upon the Nail; and over the Part affected applied *unguent. basilic.* with *Emplastr. diachalcit.* The second day after, opening it again, but finding no digestion, I dress'd it as before, and the next day fomented it with a *Lixivium* wherein was decocted *absinth.* &c. I cleansed the Ulcer of the Precipitate, and dress'd it with a Dossil dipt in *oleo terebinth.* hot, and *unguent. basilic.* with an Emplaster over it. The next day I dabbl'd it hot with *ol. terebinth.* upon an armed Probe, fill'd it with Precipitate, dress'd it up as the day before, and desired that a Physician might be called to see the evil quality of the Ulcer, I suspecting it would not digest. The second day after, Doctor *Jaspar Needham* met me, and saw the Ulcer dress'd. There then lay a hard dry Escar without either Matter or Gleet, which I took for a good sign, and with my Knife made a little separation of the Escar, to give vent to it, and dress'd it up with Lenients, to hasten the fall of the Escar. It was seven or eight days in separating, and then it came off with a well-digested Matter, incarnated, and in a few days cicatrized.

When these Ulcers corrupt the Bone, the best way is to cut off that rotten Joint, to preserve the rest.

Thus One being affected with a putrefactive Ulcer to the Bone, whereof lay bare under the Nail of one of her Great-Toes, I advised the cutting off that Joint: which she consenting to, (as being the most easie and speedy way to prevent further mischief) I sent for a Mallet and Chisel, and cut it off. Then having permitted it to bleed some ounces, I dress'd it up with *pulv. Galeni cum albumine ovi*, with some snips of an Emplaster cross over the Stump, and a piece of a Sheep's-bladder with Bandage to retain the Dressings close. The second day after I dress'd it *cum terebinthina & vitello ovi*, and thereby digested it; then incarnated it with *unguent. diapomphol.* and with the help of the Vitriol-stone and Pledgits dipt in a Solution of *sach. Saturni in sp. vini* cicatrized it in few days.

C H A P. XIII.

Of Pernio.

Description.

Differences.

Causes.

Signs.

Prognostick.

Cure.

PERNIO is a peculiar Inflammation, and belongeth to the Blood ; it raiseth a thick red Swelling with itching Pain in the Hands and Feet.

Those affecting the Hands, are generally call'd *Chilblanes*, and under that notion I have seen them in the Faces of some tender Persons who do not often expose them to the Air without a Mask. When they affect the Feet, they are call'd *Kibes*.

This Disease happens sometimes in People of Age, but more often in Children.

The outward Cause, is the nipping cold Air in the Winter-season, which pierceth the Skin, maketh painful Swellings, and at the same time shutteth up the Pores so as the Humour cannot transpire, whereupon it corrupts and raises little Wheals or Blisters, which ulcerate the *Cuticula*, and corrode into the Skin, and sometimes deeper, as in *Kibes* is frequently seen.

The internal Cause may be taken from some indisposition of the Blood.

The Signs are manifest in the back of the Hands and Fingers, they appearing, as we generally express them, swell'd with cold. They are of a thick red colour, and thrust out many small Wheals which itch very much, and being rubb'd do ulcerate and chop the Skin, and discharge a thin Humour. *Kibes* appear after the same manner in the Heels.

Chilblanes are exempt from danger, but are vexatious, and not easie to cure whilst the cold weather lasts ; and being cured, are apt to return yearly. The *Kibes* may prove dangerous, and difficult to cure, if they be any whit neglected, the Matter being apt to ulcerate the Flesh to the Bone, and sometimes gangrene.

In the Cure, the manner of living is to be considered, especially that they defend themselves from cold, and keep their Feet dry and warm. Of the Medicaments proper in this Disease some are preservative, while the Skin is whole ; and others are curative, and necessary when they are whealed and ulcerated.

The Preservatives are, as I have said, to cloath the Parts Warm, that the Pores may be open to give a breathing to the Humour : to which purpose, Furred Gloves and Woollen Mittens and Socks are to be commended, also Dogs-skin Gloves for the Poorer sort ; the Richer may have Oiled Gloves. Socks dipt in Brandy-wine and worn are preventive. The Mariners, to prevent this Disease in their Hands, dip their Mittins in Sea-water, and having wrung out the Water, draw them on. All Fomentations, whether it be fresh water, or Beef or Fish-broth, are proper to further Transpiration. In the Cure, we commend the Decoction of warm Plants, as Wormwood, Southernwood, Mugwort, Marjoram, Thyme, Hyssop, Rue, Rosemary, Bays, and Juniper, with their Berries. Turneps are the specifick, and if they be frozen, they are more efficacious. *Unguent. rosat. cum oleo terebinth.* in a roasted Turnep, is an Approved Remedy in the Cure of them : Also this ; *R. manna, thuris, an. ʒj. cort. pini ʒij. axung. porcinae & anserin. an. ʒiij. ceræ q. s. fiat Ceratum.* If the Ulceration be large, it requires to be cured as in an Ulcer with Fluxion.

In the Cure of *Chilblanes* we are never consulted, unless they be complicated with some other Disease, or are past the Cure of common Applications.

A Girl

A Girl of about nine years of age, of a very ill habit of Body, was the last hard Winter very much troubled with Chilblanes upon her Hands and Fingers. She had also Kibes on her Heels, and about one of her An-<sup>1. Obser-
vat. Of
Chilblanes
and Kibes.</sup> cles, and on the Small of the other Leg. I directed a Fomentation of a Decoction of some of the aforesaid Plants, with an addition of Brandy-wine, with which they were all bathed. The excoriated Chilblanes I dressed with *unguent. de lithargyr.* upon Pledgits of Lint lying at such distance as the Matter might get out between. The Clusters of Wheals were dap't with a Solution of *sacchar. Saturni. in spir. vini*, and the fore-mention'd Cerote applied over all. From the Kibes, which were ulcerated and fordid, I clipt the loose *Cuticula*, and dressed them with *unguent. basilic. cum Merc. precipitat.* and sprinkled some of them first with *Merc. precipitat.* The Excoriations about them were dressed with *unguent. tutiæ*, &c. according as they required, during which she was purged, and happily cured.

A Gentlewoman of about forty years of age, abounding with sharp Hu-<sup>2. Obser-
vat. Of
Chilblanes
in the
Face, Ears
and Hands.</sup> mours, was some Winters past grievously afflicted with Chilblanes on her Hands and Fingers, which terminated in great Excoriations: they also affected her Face and Ears. I let her blood about ℥viii . and dressed the Ulcerations with *unguent. tutiæ*, and wash'd the Parts whealed and swelled with *spir. vini* wherein was dissolved *sacchar. Saturni*. The next day she was purged with an Infusion of *senā, rhabarb. cum syr. ex infus. ros. cum agarico*. I bathed her Face and Hands with *Barnet-posset*, and dressed the Ulcerations with *unguent. de lithargyr.* She was prescribed a medicated Ale with *sarsaparilla, China*, &c. with the antiscorbutical Plants, and was sometimes purged with *calomel.* and *resina Jalapii*: by which method she was cured, but hath been since subject to Chilblanes, and I believe will be so every Winter as long as she lives.

I was fetch'd to a Youth about ten years of age who had Kibes on both his Heels. I bathed them at that time with Beef-broth out of the Pot, and clipt away the *Cuticula* which hung over them and shut in the Matter. That being removed, I dressed the Ulcers which were fordid with Detergents, *unguent. basilic.* Precipitate, and *alum. ustum*, &c. as above-said, and the Excoriations with Epuloticks: but the long continuance of the Ulcers had produced a Fluxion, which swelled the Parts about. They not being so capable of Bandage, I caused a laced-Sock to be made and put on; by which having restrained the descent of the Humours, I fomented the diseased Parts with a *Decoct. salviæ, beto. flor. ros. rub. balaust. nuc. cupres.* in Wine, then applied Compresses dipt in the same, and by good equal Compression disposed the Ulcers to incarn and cicatrize, and cured them as Ulcers abounding with humidity.

CHAP. XIV.

Of a Varix.

HITHERTO I have treated of Tumours arising from the serous part of the Blood: I shall now deliver somewhat of those which take their original from pure Blood; and they are of three sorts, *Varix*, *Ecchymosis*, and *Aneurisma*.

Varix is the dilatation of a Vein: it happeneth in divers Parts of the Body; but for the most part the Thighs and Legs, the Testicles and hæmorrhoidal Veins; and in Women, the Belly are frequently affected.

It proceedeth from the restagnation of gross Blood, which being transmitted

Cure.

into

into the Veins, either by reason of the depending of the Part, or from some other pressure upon the Vessel, or else by its own grossness, proves unapt for Circulation. Then, instead of continuing its current proportionably to the other Parts, it stops in the place and coagulates, and by degrees encreaseth it self by the accession of the like particles out of the succeeding Blood; and, enlarging its bulk, dilateth its Vessels into a capacity big enough to receive it. This coagulation of Blood in a *Varix*, is not so entire as to stop the passage wholly up: For the succeeding current always forceth at least its thinner parts by the sides of the *Coagulum*, and consequently helpeth the dilatation: But it lieth lazily there, and suffers the rest of the stream to pass by it. This most commonly happens in cutaneous Vessels, where the Veins have no assistance from muscular Flesh which by frequent pressure would otherwise be apt to squeeze it forwards. To which it may be added, that the Valves of the Vein so swelled, whether naturally or accidentally, are weakened, and do not sufficiently support the Blood in its ascent; so that, falling down upon the sides of the Vessel, the weight of it is too great to be driven forward by the venal motion of the Blood.

All Parts of the Body are capable of *Varices*, tho' they are most commonly in the depending ones, as the Thighs, Belly, hæmorrhoidal Veins, the Testicles, &c. for the reason aforesaid. But in other places, where Depending cannot be the cause of the check of Circulation, we do see *Varices* to grow.

In some places it oweth its original to Natural Causes; as to the generation of Milk in the Breasts, and of the *Fætus* in the Womb: in both which cases, Nature being oblig'd to spend the nutritious *Serum* upon the uses there intended, the Blood returns thick, and is apt to restagnate, and usually encreaseth the Veins at those times to six or seven (it may be ten) times their natural bigness: which very accident is by Dr. *Walter Needham* (in his Book *de Formatu Fætus*) made use of as an argument to prove, that the nutritious Juices are carried to those places by the Arteries, and not by any peculiar Vessels. But it also preternaturally falleth out so in Tumours of the Breasts and other Parts: in all which (but most visibly in *Cancers*) the Vessels enlarge, and the Veins become varicous. The Cause of which may be referred either to the coagulation of the *Serum*, or grumousness of the Blood, or to the obstruction of the Vein some where in its passage by some angustation upon it by part of the Tumour; from whence it will often happen that the Vein beyond it hath its current stopped, and is forced to swell. Nay, not only the contraction of the Vessels by preternatural Tumours doth this, but also any other Pressure. As in a Woman with Child, the burthen lying upon the *Ramus Iliacus* on either side of the Body, makes the Thigh and Leg on all that side varicous. Streight Gartering doth the like in the Leg. So the weight of the Testicles or the pressure of a Bolster-Truss, and in case of Rupture, renders them varicous. Riding much on horse-back doth the like, by reason of the pressure that is made upon the inside of the Thigh by the Saddle, to which it usually clings; especially if you ride with long Stirrups. So also by much Walking, and in Labouring-people, *Varices* usually happen, being occasion'd, as I suppose, by the perpetual contraction the Muscles are put upon in standing; which being so contracted, do press upon the upper branches of the Veins in the Thigh, and streighten them, thereby hindring the free ascent of the Blood.

Signs.

They are easily known, in what external Parts soever they are, by the turgency, the crooked figure of the Veins, and azure colour, which is more or less apparent as the Veins lie superficial or deep.

The Sign of a *Hernia Varicosa*, is the unequal knotted Tumour in the Vein leading to the Testicle, with a relaxation of the same Testicle: and when the Testicles are inflated with Wind, the Vein is also distended and painful, What

What the Signs are of the Hemorrhoidal *Varices*, and how they are to be treated, you may see in their peculiar Treatise.

Varices are not dangerous in themselves, they rather free the Patient from imminent Diseases, especially those of Melancholy; according to that Aphorism of Hippocrates; *Insanis si varices vel hæmorrhoides superveniunt, sit insaniæ solutio.* Which words are to be understood of Veins if they grow very large, or if they break and run: but if they flow intemperately, *Cachexia*, Dropsy, Consumption, and such-like Diseases, follow. So, on the contrary, if they be unseasonably suppress'd, Madness, Pleurisie, Coughing of Blood, Pain in the Kidneys, Apoplexies, &c. do follow. The *Hernia Varicosa* or *Circoscèle* is difficult to cure, as the rest are.

The *Varices* ought not to be cured, unless they be painful, or that they be extended into a large Tumour, or ulcerate and bleed much: for, as I have said, they preserve Health. But if there be a necessity of curing them, it ought to begin with Purging and Bleeding, not once or twice, but often repeated; and if the *Viscera* be in fault, they ought to be strengthened and amended; after which the Cure may be endeavour'd by astringent and exsiccant Medicaments, and those to be applied with convenient Bandage, to press back the Blood coagulating in the Vessel, and moderately resist the Current. If these suffice not, then, according to the ancient practice, you are to proceed by Section, dividing the Skin, and separating the Teguments; and having rais'd the varicous Vein, you are to pass a Ligature above and another beneath it, making a deligation of them; then slit the Vein, cast out the gross Blood, and afterwards digest and heal it, as is after said in an *Aneurisma*. With what success this hath been done, you may read in the Works of *Fabricius Hildanus*: and whether the Pain be little or much worth the while, you may see *Marius* his Argument thereof, in his Life set down by *Plutarch*. In my Practice I have met many diseased with varicous Swellings in the Thighs, Legs, Belly, &c. some of them very large, and as unsightly as troublesome: but I never met with one Patient that cared to hear of the Cure by Ligature, nor indeed have I seen any great reason for it. For if the Unsightliness and Pain be in the Legs, it may be helped by the wearing a laced-Stockin, placing a Card, piece of Vellum or beaten Lead between them. A laced Trowze will do as much for the Thigh. When they affect the Belly, they may be restrained by a Bracer, without much trouble to the Patient, or inconvenience to his health. But if you suspect it, you may in great *Varices* both purge and bleed them. The Medicaments externally applied are *baln. cortices granat. ros. rubr. nuc. cupres. Empl. Cæsaris, unguent. sumach. &c.*

The Cure of the *Hernia Varicosa* is by good Bandage, viz. a Bag-Truss, and the same Medicaments above-mention'd: but if they be distended with Wind, treat them as flatulent Tumours. How the *Varices* when ulcerated ought to be dress'd and cured, you may see in the Treatise of *Ulcers*.

CHAP. XV.

Of an Ecchymosis.

ANOTHER sort of Tumour arising from meet Blood, is the *Ecchymosis*, call'd by the Latins *Suffusio* or *Sagillatio*: which two latter are more proper to the Eye than other Parts.

Ecchymosis may be defined, an Extravasation of the Blood in or under the Skin or any other Part, the Skin remaining whole.

Cause.

It is an eruption of Blood from the lesser Vessels in the Skin or near it, whether from Blow, Bruise, Fall, or Prick of a Lancet in Chirurgery, when the Orifice of the Vein lieth not directly under the Orifice made in the Skin, so as that the whole stream may discharge there, and after bleeding both be closed together. For if when you close the outermost the inner lieth open, it will make a Sugillation.

These external Effusions are the Subject of this Chapter.

To the better understanding of the nature of these, it will be necessary to divide the Blood into two parts, *Serum* and *Grumus*.

The *Serum* is that fluid substance which floweth about the *Coagulum* or *Grumus* in the Chirurgeon's Porringer. It is not only the nutritious juice that nourisheth all the Parts of the Body, but also the Balsam that heals it; and is that thing that is capable of digestion, discussion, and many other alterations. This is the *Vehiculum* of the *Grumus*, and whilst it circulates doth keep it fluid, and causeth its perpetual motion through all the Vessels and Pores, as long as they continue incorporate together. And in extravasation, if the effusion be not great, it will by degrees swallow up the *Grumus*, dissolving it and returning it into the Veins again: but if the effusion be great, so that the *Grumus* separates from the *Serum* in the Contusion, there it difficultly reunith with the *Serum* again, much less digests, but either putrefieth in the Part, making Inflammation, and sometimes Gangrenes; or else, which is more seldom, hardens there and dries, making only a *morbus in numeris partium*. Such a one Doctor *Walter Needham* and my self saw in the Foot of a young Gentlewoman, who was our Patient upon another account.

Signs.

Causes.

Prognostick.

Signs of a Contusion, are the black-and-blue colour with or without Tumour. The *Causes*, as Blow, Fall, &c. are learned from the By-standers.

The danger is small, if the Contusion be such: also whilst the Humours are thin and fluid, there is hopes of returning them back, or they may be afterwards discussed.

But when any great Contusion happens, there the case alters, and danger is often great: of which, to omit many others, that of *Ingrassius* is a remarkable instance; where a Noble-man's Leg being bruised by the armed Knee of one that encountred him on horse-back, it killed him in three days.

When the Part, instead of being black, blue or green, groweth red, hard and painful, the Danger is eminent. Such was the case of a fat Gentleman, who, by a Fall upon his Buttocks going down stairs, bruised those Parts, and neglecting the Cure, it tended toward a Gangrene, but was got off by Scarification and Discutients.

Cure.

Since the discovery of the Circulation of the Blood, some People have proposed to themselves the Cure of this Disease, by returning the Blood back into its Vessels by warm Applications, as *spir. vini*, &c. Which possibly may have seemed to effect it where the *Ecchymosis* hath been small: but in great effusions of Blood, accompanied with much Pain, it is not reasonable to hope a return of the Blood by such Applications; for thereby the Tumour would be made bigger, and the least that can be expected therefrom is a Suppuration: whereas those that shall be treated according to the Method of the Ancients, by Repellents, and afterwards by Discutients, shall be secured from Apostemations and soon recovered, if the Habit of the Body be any whit good.

If the Effusion be great, we begin the Cure by opening a Vein, and drawing Blood proportionably. If it be small, the common Remedy of Brown-paper soaked in cold Water or Oxycrate may serve for the first Applications; and afterwards the Sugillation may be breathed forth by fomenting it with Discutients, or warm Water, or with *spir. vini, ol. anisi*, &c. But if we suspect

great

great Extravasation, we then embrocate with *ol. ros. myrtill. cum aceto & album. ovor.* and renew the Applications often: or if more astringent be required, there may be added of the *pulv. bol. Armen. sang. dracon. flor. ros. rub. balaust. myrtill. gallar. nuc. cupres.* And after the Fluxion is restrained, we apply Discutients with Repellents. *& ung. aregon. ℥iij. ol. lumbric. cham. rutæ, an. ℥j. terebint. ℥ij. pulv. sem. fœnug. ℥vj. flor. ros. rubr. balaust. an. ℥ij. croci ℥ij. ceræ, q. s. fiat Ceratum.* If the Skin be whole, a mixture of the tops of green Wormwood, Bay-salt and Vinegar may be applied. In great effusions of Blood this Discutient may be applied after the Fluxion is checked: *& rad. bryoniæ, sigill. Solomonis, an. ℥iij. flor. cham. sambuci, an. P. j. far. hordei fabar. sem. fœnug. an. ℥j. summit. absinthii M. j. sem. cumini ℥iij. coq. in vino, & fiat Cataplasma S. A. addendo in fine Oxymel. scillit. q. s.* and foment the Part with a decoct. *absinth. in lixivio com.* If after such Applications the Blood remain extravasated, you shall then open the Tumour, lest it corrupt the Bone or Parts underneath: but if it inflame, and turn to Suppuration, hasten it by Suppuratives, and give vent to the Matter, and deterge with *mundif. ex apio, &c.* as the Putrefaction requireth. If it tend to Mortification, treat it as such; but with Caution to leave of these Applications when you have restored the Native Heat to the Part, lest thereby you make new Fluxion, and the Part gangrene indeed.

In case the Body be bruised by a fall from on high, or any other way, the Patient is to be immediately let blood, and the bruised Parts to be embrocated with some of the abovesaid Repellents; or, if it may be had, lap him in a Sheep-skin flay'd quick off: and then you may prescribe the common Remedies, as a draught of Spruce-Beer, or *℥j. sperm. ceti, Irish-Slate,* or such-like Powders; *& rhubarbi tost. terræ sigill. muniæ, an. p. æq.* The Dose may be *℥j.* in some proper Vehicle: and afterwards you may by Discutients in the form of Unguents or Cerots breath forth the remaining bruised Blood.

I shall now give you some Observations of an *Ecchymosis*, and should begin with the lesser, as those in the Face, which are so commonly known by the black-and-blue marks which they leave behind: but the Cure being as common, makes it not worth my labour. Something of them you may meet with in the Treatise of *Wounds*. Of the Cure of the greater Contusions, I shall give you some Instances.

A Person of about thirty years old, of a full Body, stepping into his Coach, his Foot slipp'd, and he bruised his Shin upon the Foot-board. He returned to his Lodging, and purposed to send for a Chirurgeon: but in the while looking upon it, and seeing no Skin broken, he was advised to bath it with *spir. vini*, to rarefie the Blood and keep it circulating. (A new way to make work for a Chirurgeon.) He did so, and lapp'd it about with a Cloth dipt in the same, continuing this way of Dressing some days. It growing daily less painful, but the Swelling not going away, I was sent for, and perceiving indeed the black-and-blue colours to be in a great measure gone, but by their relation the Tumour was bigger: by which it was easie to judge of the great virtue of *spir. vini* so used. Whereas by Repellents at first with the expulsive Bandage the Blood might have been restrained, and afterwards what was extravasated might have easily been discussed. We see it daily in our Practice, and censure those of our Profession who suffer such Extravasation in every little Tumour to corrupt.

In this Patient there was a Tumour of about a Week's continuance: the question was, whether what was contained in the Tumour was Blood or Matter? If Matter, then a painful Fluxion should have preceded, with In-

flammation and Hardness, and have terminated by Discussion or by Suppuration : whereas this swelled and was painful upon the blow, but was never hard nor inflamed, or much painful, after the sense of the stroke was over, but soft from the first night ; and must consequently be Blood. But whether it were Blood putrefied, or concocted Matter, there remained no hopes of discussing it ; nor was it safe permitting it to lodge so near the Bone in expectation thereof. Therefore, without further dispute, I laid it open by Incision, and discharged about two spoonfuls of a corrupt black Blood and *Serum* ; then dressed it up with a Digestive *ex terebinth.* and embrocated the Tumour with *ol. chamem.* and applying an *Emplast. stict. Paracels.* with Compress and Bandage, rolled it up. The third day after I dressed it again, fomenting it with the Decoction set down in the Method of Cure, and deterged with *mundif. Paracelsi* ; and by the help of the Vitriol-stone and the common Sarcotick, *unguent. diapompholyg. &c.* incarnated and cicatrized it, but continued the Bandage a few days after, to strengthen the Part.

2. Obser-
vat.

A decayed old Gentleman walking in the streets one evening, was crush'd up to a wall by a Cart : the Wheel passing too near him, bruised the out-side of his left Leg, but did not break the Skin : it was suddenly swelled, and very painful. His Friends chafed it with Brandy-wine, and, dipping a Cloth in the same, bound it about the Part. By this way of dressing, that side of his Leg swell'd and inflamed very much. Others advised him *Lucatell's Balsam* ; by which improper Application the Fluxion was encreased, and the Patient confined to his Bed. Here was an Object of Charity, upon which account I was sent to him. I found the out-side of his Leg swell'd and apostemated from the Gartering to the Small. I laid it open by Caustick an inch or two, according to the length of the Member. In dividing the Escar, there was discharged a large quantity of Matter with clotted Blood in it. I dressed the Escar with Lenients, and embrocated the Parts affected *cum ol. ros. & vino austero*, and applied *Empl. è bolo* over the Tumour with Compress and Bandage. The next day I brought a Decoction of *absinth. flor. cham. ros. rubr. bacc. myrtill.* fomented the Leg, and dressed the Escar with Lenients to hasten Suppuration : then by good Bandage thrust out the Matter, and endeavoured to agglutinate the hollow Parts ; but could not do it without laying it more open by a snip made with a Probe-scissors. After which I deterged the Ulcer with the Vitriol-stone and with *unguent. basilic. cum Merc. præcipitat.* Then I incarnated and cicatrized it, as hath been said in the former Observation. If instead of *spir. vin. &c.* they had dressed this Man's Leg *cum bol. Armen. aceto, album. ovor. & ol. ros.* they might have happily prevented the pain and trouble that followed.

3. Obser-
vat.

An old Gentleman was sorely bruised by a Fall in several parts, but especially on the inside of his left Arm. After the space of two months I was consulted, and saw an *Ecchymosis* very hard and big lying along the Vessels that reach on the inside of the Arm to the Elbow-joint. I embrocated *cum oleo lumbricor. vulpin. & guttis aliquot olei origani & lavendulæ*, and applied *cerat. agrip.* over all. The next day I fomented with Discutients, to which was added *spir. vini.* Then, having embrocated it as abovesaid, I applied a Cataplasim *ex farinis hordei, orobi, lentium, sem. sænugreci, cum flor. chamæmeli, sambuci, &c.* decocted in some of the former *Fotus*, with an addition of some of the abovesaid Oils and *Oximel scillitic.* By which method the Swelling and *Ecchymosis* were scattered.

4. Obser-
vat.

A Man of about sixty years of age scorbutically affected, by a Fall upon a paved Floor bruised his left Thigh. It was embrocated *cum oleo ros. & aceto*, and an *Empl. è bolo* applied over the grieved Part. Venæ-section was proposed, but not

not permitted, by reason of his age, nor would he purge. The third day he complained of extremity of Pain, and suspected his Hip luxated. I took off the Dressings, and felt the Joint well, but all that side of the Thigh over-spread with an *Ecchymosis*. I embrocated with *ol. chamæm. & lubricor.* with an addition of *ol. terebinth.* and applied *Empl. stict. Paracels.* with a third part of *Empl. diachalciteos*; and the next day fomented the diseased Thigh with *decoct. absinth. &c. in vino & aqua*, to which was added *spir. vini*. Thus the extravasated Serum was resolved: but the Emplaster was continued by reason of his Pain, which remained notwithstanding. Some weeks after he complained of a Nummedness of the whole Leg: upon which account Embrocations were repeated, also Purging and *decoct. sarsæ, &c.* with Antiscorbuticks: but he took little of them. During this, the Leg began to emaciate, and a Species of a *Paralysis* encreased. Vesicatories were applied, and afterwards a Caustick below the Gartering. The next day I divided the Escar, and dress'd it with Lenients, but left the attending of it to my Servant. Some days after, being informed that the Escar did not separate, but grew painful, I visited him, and saw it dry, not likely to separate: the Leg was also swelled with pituitous Humours. Since his Fall he had been below stairs walking with Crutches, but of late did sit up most part of the night, by reason of his Pain. This and the weakness of the Member had occasion'd the Swelling, and enfeebled the native Heat in the designed Fontanel. I cut into the Escar, dapt it *cum oleo terebinth.* hot, and fill'd it with *Merc. præcipitat.* then dress'd it with Pledgits applied warm out of a mixture of *unguent. basilic.* with some of the said Oil; after fomented the Leg with a *Lixivium* wherein had been decocted some of the warm Plants, and apply'd a Cataplasm over the Ulcer. Thus the Escar was digested, and fitted with a Pea, and the Swelling restrained: but some months after he sunk under a *Diarrhæa*.

A Man of about thirty-six years of age, of a lean Constitution, by accident ^{s. Observat.} of a Fall near two stories high into the street, was sorely bruised, especially on his left Side, Hip and Arm. I immediately let him blood largely, and embrocated the Part bruised *cum ol. ros. myrt. & aceto*, and applied astringent Emplasters as above-mention'd. A Clyster was also prescribed, and *Irish Slate, &c.* was given him, whereby he was disposed to a breathing Sweat: and at the hour of Sleep an Anodyne-draught was prescribed, to encline him to rest. By this method the Fluxion was checked, during which the Parts diseased were fomented with a *decoct. summitat. absinth. anethi, majoranæ, flor. cham. sambuci, sem. anisi & cumini*; to which was added *spir. vini*. Embrocations were also made *ex oleis aneth. rutæ, & terebinth.* and the Cerote above proposed was applied over them: and in progress of time he was cured.

CHAP. XVI.

Of an Aneurisma.

AN *Aneurisma*, according to my Description, is an *Ecchymosis*, and indeed the highest Species of it. But since Authors have given another Account of that Tumour, and have allowed it a peculiar Chapter, I have done so too; the rather, because the nature of the Vessel through which the Effusion is made doth require a different method of Cure.

It is a Tumour soft, white, and yielding to the touch, but riseth again upon the removal of your finger; and is for the most part accompanied with pulsation of the Artery. ^{Descrip- tion.}

It

It is raised, according to the opinion of Authors, by dilatation or relaxation of the Artery; they supposing the Blood to have burst its passage through the first Coat, and dilated the second, thereby raising the Tumour. And this some of them have delivered to us so positively, as if they had in Opening found the exterior Coat so dilated. This I my self was taught, and some while believed: but not having been able by my Practice to discover one *Aneurisma* made by dilatation or relaxation of the outward Coat, I am apt to believe that there is no such thing, but that it takes its rise from Blood bursting quite through the Artery into the interstices of the Muscles, where it raiseth a Tumour suitable to the Cavity it findeth, growing bigger or less, of this or that shape, as the Muscles give way. But this Tumour consists of Blood extravasated, the Artery lying undilated the while. I do therefore suspect the possibility of an *Aneurisma* by the dilatation of the outward or softer Coat of the Artery; because it seems improbable that a force big enough to burst the inward Coat, which is so tough and firm, should leave the exterior, being softer and weaker, whole, and go out so leisurely into it as to give it time for dilatation. Those which I have met with did all come from downright eruption through both the Coats: and those that come from external Punctures must of necessity begin with a breach of the external Coat first, it being next the Lancet or other Weapon that made the division. *Sennertus* would have it to heal again, though contrary to my experience, who have always found it open as well as the internal: and indeed Reason must tell us, that the constant eruptions of Blood out of the Artery in every Pulse must needs keep it open; nay, the Blood keeps not within the bounds of any one Membrane, but I have seen it extravasated through all the interstices of the Muscles of the whole Arm.

Causes.

The Causes of *Aneurisma's* are divers, Internal, or External. 1. The Internal Cause is, the impetuosity of the Blood, which moving with greater violence in its Channels than the Artery can sustain, doth force its way through the side of the Vessel, and, bursting a hole in it, doth issue into the space that lieth between it and the neighbouring Muscles, there incrassating the Membranes of the Muscles, and framing it self a nest.

This *Impetus* may rise first from the quantity of the Blood: Either when it is more than the Vessel can contain, a case that seldom happens to produce an *Aneurisma* in any conspicuous Vessel; but if any such thing be, it opens at the Nose, or Lungs, or in the Brain, (there causing an Apoplexy:) or in the Stomach, Guts, Anus, &c. Or else when this Blood is not really more than the whole Body naturally should contain, but by violent Passion or Motion in stirring, is too forcibly driven forwards from the Heart towards some peculiar Artery; when the farther progress being (it may be) intercepted by some violent contraction of the Muscles through which it must pass, it of necessity breaks the Vessel: and thus in violent Vomiting and other Straining *Aneurisma's* are often made in the Neck, Arms, Legs, &c.

2^{dly}, From the quality of the Blood, which being too sharp or thin, erodes the Vessel; or, being highly fermented by other Causes, bursts through all.

This Blood, though extravasated, doth usually pulse: partly, because the body of the Artery from which it breaks doth pass through it, and by its Pulse doth agitate that; and partly, because in every such Pulse some addition of Blood is made to the Tumour. Yet this Pulse is chiefly in small *Aneurisma's* or superficial one's; for in the greater, the motion of the Artery is not always felt.

2. The External Causes, are Puncture by Lancet or Weapon, cutting, bruising, erosion, or whatever else may divide the Coats of the Arteries.

The

The *Differences* of an *Aneurisma* are either from its Magnitude, Situation, or Shape. From the Magnitude it is donominated great or little, possessing the whole Member or a Part. From its Situation, it is superficial near the Skin, or deep in the Muscles. From its Shape: either it keeps the shape of the Part; which usually happens when the Orifice in the Artery is small, so that the Blood comes out leisurely, and finds the neighbour-Membranes so well united as to keep it within a certain chanel, which Membranes are also fortified by an addition of a *Serum* coagulated from the extravasated Blood: or else it alters its form, when it groweth suddenly and irregularly, the Eruption being so great that it cannot be kept within bounds; or when it is by an ignorant Chirurgeon treated with Lenients and Discutients, being mistaken for some other Disease; for in this case the Membranes are relaxed, and give way to the Tumour.

From these Differences the *Signs* of an *Aneurisma* may be taken. If the Tumour be small and superficial, a Pulsation may easily be felt in every part of it. If it be great and rise suddenly, and was white and soft from its first appearance, though there be no Pulsation to be felt, yet you may conclude it an *Aneurisma*, there being not any Humour save that of Blood which can so suddenly raise such a Tumour. The often encrease and diminution of the Tumour is also a Sign of an *Aneurisma*; the diminution of it being the return of the Blood into the Artery, whence it as often cometh out again.

If it happened from a Puncture of a Lancet, the manner of the spurting out of the Blood, will shew it: and if it do not bleed, yet a sudden Tumour thrusts up under your Finger, with Pulsation, the Blood breaking out into the interstices of the Muscles, though not quite into the Skin.

The Tumour is more compact or scatter'd, according as there was care taken at first to restrain it within compass. In some of these there is Redness and Inflammation, by reason of the expansion of the Parts beyond their capacity, or from the putrefaction of the Blood: in which latter case Fever and Fainting for the most part accompany it.

All *Aneurisma's* are difficult to cure. Those which are large, and arise from Arteries deep in the Muscles, to which you cannot make your Applications, are incurable: and if they be unadvisedly opened, the Patient is in great danger of his life. But if the *Aneurisma* be in such a Part as is capable of Bandage and application of Medicaments, the Cure is feasible; or the Disease may be palliated to the ease of the Patient.

The Cure of an *Aneurisma* consists in the timely application of proper Medicaments, and Bandage to restrain the Blood and keep it within its chanel: or by Escaroticks or the actual Cautery you may destroy it. But if it lie where you may take it up, the Cure is then best performed by dividing it. The Medicaments proper to restrain it in its motion, and agglutinate the Vessel, are, *bol. Armen. sang. dracon. thus, aloë, far. volat. gypsum*; also the juices of *plantag. burf. pastoris, millesol, vincæ pervincæ, pilosellæ, lamii*, and such-like. The Compounds may be made of some of the fore-going Powders with some of the aforesaid Juices, or mix'd cum *aceto & albumin. ovorum*.

In the first appearance of the Tumour, if it arose from an internal Cause, you shall endeavour, by the application of some of the aforesaid Astringents and Bandage, to restrain the growth of it: but if it be in a place incapable of Bandage, you must content your self with the application of *Empl. Cæsaris*, or such-like. If it be near the *Trachea Arteria*, the Patient may wear beaten Lead or Gold upon it covered with Sarsenet, or the like. You are to be well advised, before you attempt the Cure by Opening it. If by Putrefaction the Blood burst forth suddenly upon you, the life of your Patient is then in danger,

danger, and it will become you to be quick in the application of good Restrictives and Bandage, till you have time to consider what to do : and be sure to provide against the next Eruption ; for till it break of it self you are not to open it ; and then you may attempt the stopping of the Flux by such means as have been or hereafter shall be proposed.

If the *Aneurisma* happen by Puncture in letting blood, the Chirurgion ought to permit the Vessel opened to bleed freely : but if it doth not bleed well, let him immediately loosen the Bandage, and apply a Compress dipt in His MAJESTY'S Stiptick, or, for want of it, in *Oxycrate*. Let it be held firmly upon the Apertion by a Servant, whilst the Chirurgion openeth a Vein in the other Arm, and maketh Revulsion by a large evacuation to fainting, if it may be permitted. The while let your astringent Powders be applied to the Wound, with good restrictive Emplasters over them. The upper part of the Arm to the *Axilla* is to be defended by Cloths wrung out of *Oxycrate*. Then with a Rower with two heads take two or three turns upon the diseased Part, and rowl upward, (his Arm being bowed the while :) and for more security, take a turn about the Neck, and return back with your Bandage gradually to the Part affected, fastening it on the outside ; then make the expulsive Bandage from the Hand upward. These ought to be made to the ease of the Patient, who, being thus dress'd, must be put into his Bed, and his Hand placed upon his Breast. Contempering Juleps, Emulsions, Opiats, &c. ought to be prescribed him, and his Diet, &c. to be regulated as is proposed in the Chapter of the *Wounds of the Veins and Arteries*. Having made this Bandage well, you are not to be over-hasty in opening it again ; for this first Dressing haply secures your Patient. For the great mischief happening in these *Aneurisma's* proceedeth from the ignorance of the Blood-letter, who, not considering the error by him committed in letting-blood, binds up the Arm carelessly, and the next day, upon the Patient's complaint, not discovering the cause of the Tumour, foment and embrocates it, thereby making way for the Blood to empty it self into the interstices of the Muscles ; whereupon the whole Arm swelleth. In which case a laced-Sleeve and Glove may be of great use. When this method fails, it may be necessary that you prepare for Deligation of the Artery. The manner of doing it you may see in the Chapter of the *Wounds of the Veins and Arteries*. I shall also shew it in one of the following Observations.

1. Observat. Of an Aneurisma's lying near the Trachea Arteria.

I Have had many brought to me with swelled Necks, upon suspicion that they were troubled with a species of *King's-Evil*, call'd *Bronchocoele* : but the Pulsation of those Tumours shewed them to be *Aneurisma's*, and the most difficult to treat, they, by reason of their situation, not being capable of Bandage. In which cases I commonly proposed the wearing of a Cap of beaten Lead made of many sheets laid upon one another, and cover'd with Silk or Sarsenet, which with Ribbons were made to fasten about the Neck with much ease : or, if they would have Emplasters, I applied some of a mixture of *unguent. sumach* with *Empl. Caesaris*, or such-like.

Where *Aneurisma's* have affected Parts capable of Bandage, I have sometime palliated them : but when they would not be so quieted, I prosecuted the Cure as followeth.

2. Observat. of an Aneurisma.

A Man of about forty years of age, having some time been troubled with a large soft Tumour on the inside of his right Leg about his Gartering, desired my Advice. It was without Pain, Inflammation or Pulsation, but soft from its first appearance, and was bigger or lesser according as he walked much or little ; which gave me suspicion it might be an *Aneurisma*. I applied *Empl. Caesaris* over it, caused a laced-Stockin to be put on, let him bleed, and advised

to Purging, regulation of Diet, and Exercise, &c. by which it was kept quiet sometime. But he, growing more secure, neglected the Rules prescribed him; whereupon the Tumour encreased, and burst forth one night in a flux of Blood. I was sent for, and found much extravasated; but the Opening it self was stopt with a clot of grumous Blood. I dressed it up with Restrictives and Compress wrung out of *Oxycrate*. Then I made Revulsion by Venæ-section and Deligation of other Parts. I also prescribed Opiats, &c. to calm the ferment in the Blood. By this, and my way of Dressing, the Blood was for some days tolerably restrain'd: but as the Opening grew bigger, the Effusion was greater. Upon which consideration, I had provided some *trochisci de minio* of several sizes, also some *pulv. sine pari Jo. Arden*. I put in some of the former, and applied my Restrictives and Bandage over the Tumour; and as often as the Blood burst forth, I continued that way of dressing, hoping by those Escaroticks to destroy the Artery. Afterwards the Orifice growing larger, I filled up the Abscess with the *pulv. sine pari* upon Dossils, and applied Restrictives and Bandage as before. The Patient grew daily weaker; but from this latter Dressing the Bleeding was restrained till the fifth day, when I was necessitated to open it, by reason of the Excoriations made in many places about it by the Escaroticks: nor was it then much. The Opening being large, I applied the Escaroticks to more advantage, and dressed the Excoriations with *unguent. album camforat.* continuing my *Empl. è bolo* and Bandage. From that time the Bleeding was stopped, I suppose by consuming the Artery; yet for some while there came away much stinking clotted Blood. While I endeavoured to keep the Blood within the Abscess, it insinuated between the Muscles, making the Calf of the Leg hollow to the very Tendon: therefore, after I was secured of the Bleeding, I made way for the easie discharge of Matter, and deterged the Abscess with *mundif. Paracels.* To the Excoriations I continued the use of Epuloticks, and nourished my Patient with good Broths, Caudles, &c. by which he recovered strength apace. The sharp Humours being evacuated with his Blood, the Abscess incarned by the application of the common Sarcoticks, and he was cured in less than a Month, recovering also the perfect use of his Leg.

Some years since, I was desired to give a visit to a Man lying in my way to ^{3. Obser-} *Whitehall*. He had a large white Tumour possessing the fore-part of his right ^{val.} Thigh of a few months growth: it was soft from the first appearance, and observed by the Patient to be bigger and lesser one time than another. I considered the Swelling, and concluded it an *Aneurisma*. That there was no Pulsation to be felt in it, was because it lay deep among the Muscles, in which case the Pulse is frequently intercepted. There lay a gummy Emplaster upon it, and an attempt had been made to open it by Caustick; but it not penetrating deep enough, the Escar separated without reaching near the Cavity. I declared to the Patient my thoughts, *viz.* that the Swelling proceeded from Blood poured forth of its Vessels, either by Erosion from within, or by some outward Cause, as by Riding, &c. and advised him not to permit the Tumour to be opened, desiring that, if his Chirurgeon should persist in the suppurating or opening of it, he would send to me to meet him. Some few days after the Patient sent me notice that his Chirurgeon had been with him, and resolved to open it: whereupon I took the next opportunity to speak with the Chirurgeon, and went along with him to his Patient; where I endeavoured to persuade him that the Swelling arose from Blood, and withal proposed a palliative Cure by a laced-Trowze and some good Restrictive. But the Chirurgeon declared himself positively for the opening of it. I seeing his resolution, replied, Since you are so opinionated, you may (if you think good) make a

trial of the Tumour, by thrusting a small Lancet directly into the middle of it ; and if, upon pulling out of the Lancet, it appear Mattery, you may lay it more open ; if it appear bloody, you may more easily cure it than one made by a Caustick. He readily assented to the trial, and the Patient rejoicing in the proposal, he attempted it with a Lancet : but not thrusting it deep enough to reach the Cavity, I took the Lancet, and, passing it into the same Opening he had made, thrust it directly down into the Cavity, and pull'd it out bloody ; but not one drop follow'd it. The Chirurgeon not being therewith satisfied, I wish'd him to pass a small Probe down into the Opening. He did so : and I also made a search with the same Probe, and felt the Cavity large and full of Liquids, which was certainly Blood, the Probe coming out bloody. I persuaded the Patient to keep his bed till that Puncture should be agglutinated, and advised the Chirurgeon to be careful in the Cure of it. We dress'd it with a Pledgit of *liniment. Arcei*, with Emplaster and Bandage : to the use of which Medicine I left them, not doubting of their care in healing up so small a Puncture. About ten days after, walking near the door in a dark evening, weary, and desirous to rest my self, the thoughts of this poor Man inclined me to go into the house. I enquired of the Land-lady if he was within. She replied, He is dying : That upon his rising out of his Bed, the Blood had burst forth excessively : That the Chirurgeon had for some days endeavoured to stop it, but had since left the Patient, and a neighbour-Woman had applied a Pultice to it ; and that the Chamber stunk so extremely as it would poison me to go into it. I went up, and found the Room scatter'd with stinking bloody Cloths, and the poor Man languishing in his Bed, which was not cleaner. I sent presently away for the Chirurgeon, and in the while made Rowlers and Compresses, and sent for some Yeast and Wheat-flower. The Chirurgeon being come, we spread a mixture of them upon Cloths, and armed several Tents with the same. Having thus prepared our Dressings as the time would permit, we took off the bloody ones, and held the Orifice close while we cleansed the Thigh from the Pultice and Blood, then stopped the Orifice with a Tent proportionably, and applied our Agglutinatives over, with Compress and Bandage wrung out of *Oxycrate*. We rolled the Member moderately straight, then laid him clean, and caused a mess of Caudle to be given him, and encouraged him with hopes of Recovery. The Chirurgeon pleaded for himself, that he thought the Patient had been dead.

Three or four days after we dress'd him again, and found him much recruited in his Spirits, he not having bled one drop : and indeed the Emplasters adhered as close to the Skin as we could desire. After we had taken out the Tent, abundance of grumous Blood issued forth : we cleansed it away, and shak'd into the Abscess about a drachm of *Merc. præcipitat.* and though we had then choice of Medicaments, yet we applied the same as before, and continued that method of Dressings, till the Blood was converted to Matter. Then we slit open the Orifice, and dress'd it as a sinuous Ulcer. After some days, observing that the Matter could not discharge while he kept his Bed till the Abscess was full to run over, we caus'd him to rise out of it : but that little while he was up he swooned ; wherefore we put him to bed again, and allowed him stronger Nourishment, and by a Seton-needle made way for the discharge of Matter to more advantage. The Abscess being well disposed to cure, I left him again to his Chirurgeon, who cured him.

This Experiment of Opening *Aneurisma's* by Puncture is not to be imitated, unless it be in such Cases as this, where both Patient and Chirurgeon are so incredulous.

Some

Some years since, while I dwelt in the *Old-Bailey*, I was consulted in the case of a Man who in his letting blood was prick'd in the Artery. The Artery did not bleed outwardly, but discharged it self between the Muscles. The Tumour, being mistaken for a Puncture of a Nerve or Tendon, was fomented with Discutients, whereby I found it much enlarged, and not only the inside but the outside of the Arm swelled above and beneath the Elbow, with a Pulsation in those remote Parts. I caused an Emplaster to be made of some of the Restrictives set down in the method of Cure, *cum ol. ros. myrtill. & aceto*, and applied it over the Arm to the *Axilla* with Compress and Bandage. I then let him blood, and disposed him to rest with an Anodyne-draught, and prescribed him Emulsions and cooling Juleps, with such a Diet as might incrassate his Blood. A day or two after I strengthened the former Bandage by a laced-Sleeve and Glove, by which for some time much of the Blood was returned back into the Artery, and the Arm seemed in a hopeful way of recovery; but through irregularity the Arm swelled again, and the Patient grew weary of us, and gave ear to every prattle; and so it happened that an Empirick was commended to them, as having an excellent Medicament to stop Bleeding. He was fetch'd, and undertook the Cure, and removed the Patient nearer his Lodging, where he treated him: but he being ignorant in making the Bandage, or possibly not thinking it so necessary, the Arm swell'd; and the Tumour on the inside of the Arm being soft and prominent, he concluded it a *bag of Matter* (as he call'd it,) and applied a few bruised Herbs to it, which eat into the Skin, and made way for the Blood to burst forth abundantly; inso-much as a neighbouring Chirurgeon was sent for, and he called others, who together made a shift to stop it at that time. But his Arm gangrened, so that within few days after they prepared for the cutting it off. The Patient's Relations, being acquainted with the Accident, sent me to them. I saw it amputated, and the Patient put into his Bed. We slit up the Arm, and laid the Artery bare. It retained its natural shape and smallness, not one jot dilated; nor was the Apertion considerable which had been made by that Accident, but by reason of its constitution continued open, as I have seen a hole punched in leather, where it was capable of receiving the Blood, if it had been time-returned: but that being omitted, the extravasated Blood forced amongst the interstices of the Muscles up to the *Axilla*, and on the outside of the Arm down beneath the Elbow, in which places we found a quantity of stinking grumous Blood.

A Man being much afflicted with a Tumour in his right Arm, occasioned by the pricking of an Artery in letting blood, having tried the Endeavours of several of our Profession unsuccessfully, some whereof had purposed the taking off his Arm, at the last I was sent for, and met Mr. *Arris* and Mr. *Hollier* there. Mr. *Gardner* was his Chirurgeon. The Tumour was large, much inflamed, and painful, with little or no pulsation: but the Accident which gave rise to the Tumour enough confirmed it an *Aneurisma*. My opinion was, that a Tumour so inflamed was not capable of such Bandage whereby they might hope to return the Blood back into the Artery. Nor indeed was it reasonable to suppose that such a putrefactive Heat as seemed to be enclosed in that Swelling was capable of being thrust back or retained longer there, without making its own way by a Gangrene; and of what danger such an Eruption might be to the Patient, if a Chirurgeon were not at hand, I left to their consideration. Then, in order to the removal of the Tumour, there were but two ways, *viz.* Amputation of the Arm, or cutting into the Tumour, and making Deligation of the Artery; which latter I commended to them. They assented to the Deligation: only the Patient desired a day or two to prepare him-

self. We applied *Empl. è bolo*, with a moderate Bandage to restrain the encrease of the Tumour the while. The fourth day after we met again, and, having all things ready, the Patient was placed in a Chair towards the light. I took off the Dressings, and made a Ligature four fingers breadth above the Tumour, on which Mr. *Hollier* made a gripe. Some other held the Hand and lower part of the Arm, whilst I made Incision down the length of the Tumour. That done, I threw out the grumous Blood with my fingers, and cleansed the Wound with a Sponge. Then desiring Mr. *Hollier* to slacken his hand, upon which the Artery discover'd it self by the Blood spurting out, I passed my Needle under the upper part of the Artery, and tied that, and cut off the end of the Ligature. Near the Wound made in the Artery by letting blood there was a cartilaginous body formed, which hindred my coming to the Artery; I cut it away, then passed my Needle, and made a second Ligature. We dressed it up with Pledgits spread with the common Digestive *ex terebinth. dipt in pulv. Galeni*, and applied *Empl. diachalcit.* mallaxed with *ol. ros.* and rowled it up to the ease of the Patient; then put him into his bed, and prescribed him an Anodyne-draught to take that night. The next day I visited him, and found him in much ease: he had slept well with half the draught was designed him, and was not troubled with those fainting Fits which he had been subject to before the Operation. The third day we took him out of his bed to dress his Arm. In taking off the Dressing we found all safe, and the lips of the Wound tending to Digestion. Mr. *Hollier*, who held the Arm above, seeing no Blood flow from the Wound, for experience-sake griped it harder: upon which the Blood of a sudden dropp'd from the Fleshy parts and Capillaries in great drops, as if it had been pressed out of a Sponge. I wondred at the manner of its bleeding, not minding what he had done: but he slackening his hand, it ceased as soon. Which may shew the ill consequence of over-hard binding in the dressing of Wounds, Ulcers, &c. We dressed the Wound with the Digestive as before, and so continued it till the Wound was well digested. From that time we dressed it with Sarcoticks, rubb'd the loose flesh with the Vitriol-stone, and hastened the cicatrizing of it with *aq. medicamentos.* &c. I saw the Ligatures fall off, and the Wound cicatrizing, then left it to his Chirurgion, it being that time indeed almost cicatrized. The Patient made me a Visit a while after, and shewed me that he could use that Arm as well as the other.

Caution.

What more concerns an *Aneurisma*, you may see in the Chapter of the Wounds of the Veins and Arteries.

CHAP. XVII.

Of an Herpes.

Names.

HERPES hath its name à *serpendo*, from its creeping quality: it is also call'd *Formica ambulativa* & *corrosiva*; and, by *Celsus*, *Ignis sacer*. It proceedeth from pure Choler (as it is yet thought) separated from the other Humours, and cast out into the superficies of the Skin.

Three Species.

There are three Species of them, differing from each other according to the Humour of which they are generated. The first is the *Simple Herpes*, proceeding from pure Choler. The second is the *Herpes Miliaris*, wherein there is an admixture of a salt waterish Humour. The third Species is *Herpes Exedens*, where the Humour added to the *Bilis* partaketh of much acrimony, and proves exceeding corrosive.

The

The *Simple Herpes* is a Pustule of a yellowish inflamed colour with a sharp head: it cometh soon to maturity, and the Matter is visible in the upper part of it whilst its *basis* is inflamed; but in the eruption of the Matter the Inflammation goeth off, and it healeth. In the Face they frequently appear single, and so they will in other Parts of the Body, and are generally taken notice of as cholerick Pustules: but they do often appear over-spreading the Back, Sides, or Breast, and are accompanied with an *Erysipelas*, and have a Fever joined with them; being in this case known by the name of *Shingles*.

The *Herpes Miliaris* riseth in a cluster of small Wheals little differing from the colour of the Skin. They are first discovered by their itching; and being rubb'd or scratch'd, they weep a thin waterish Humour: from that time a Scab appeareth in the head of each of them of the form of a Millet-seed, from whence the Tumour hath its name. As the Pustules heal in one place, they usually break out in another.

Herpes Exedens is said to be rather an Ulcer than a Tumour, but is indeed an Ulcer with Tumour, it rising in the Skin in a small Tubercle, on the top whereof there appeareth an Ulcer like a Pin-hole. It is for the most part without Inflammation or Pain. When it riseth alone it is scarce taken notice of, it mattering but little unless it be pick'd, and then it scabs soon after with a thin Scurf. But in progress of time it sheweth its ill condition, by eating away the Skin, and indurates the Flesh underneath and Parts about. Sometimes I have seen these Ulcers arise in the Skin somewhat distant one from another, making an unequal furrow; as from the upper-Lip by the Nostril creeping to that side of the Nose, so to the ridge of it, and down again to that corner of the Eye, healing in some places while it eat deep into the flesh in others.

This *Herpes* in *Lues Venerea* frequently riseth from a *Simple Herpes*, while the Matter is shut in by the Scab, it corroding underneath, and making an Ulcer; when it breaketh out, appearing like an Honey-comb, bigger or less, and of a round or long figure, according as the Disease hath more or less malignity.

The *Simple Herpes* is neither dangerous, nor difficult of cure; but in the case it may be exasperated by picking or scratching, and grow corrosive, otherwise it will heal of it self. When it first over-spreads a Part, the Patient is indisposed with Fever; but as it cometh to Matter, that indisposition goeth off.

As an *Erysipelas* doth sometimes terminate in an *Herpes*, so an *Herpes* is frequently accompanied by an *Erysipelas*.

The *Herpes Miliaris* is without Fever, but is difficult of Cure, especially if it affect the Face, Nose, or Ears. If the Cure be neglected, it eateth deep into the Flesh; and then, in what Part soever it is, the Cure is hard to accomplish.

The *Herpes Exedens* is most difficult of Cure, and if it be not timely treated, it certainly terminates in a *Phagedana* or *Cancer*; but when it riseth from *Lues Venerea*, the very worst is curable.

As to Internal Remedies; a *Simple Herpes* is cured much like an *Erysipelas*, by evacuation and contemperation of Choler. *Herpes Miliaris* cometh near to the nature of an Itch, and is to be treated with Purgatives and Alteratives much of the same kind with what is proposed for that. For the Cure of the *Exedens*, I refer you to the Treatise of Ulcers.

External Applications also in the *Simple Herpes* do imitate those of *Erysipelas*, but ought to be more drying; as *polygonum*, *equisetum*, *millesolium*, *plantag. lanum*, &c. whose Juices may either be applied upon cloths wet therein, or else be mixed with *lithargyrum. auri* & *argenti*, *cerussa*, *tutia*, *bolus armen.* so as by addition of *ol. ros. myrtil.* and Wax to make Cerots or Ointments: as, *R. succ. plantag. summit. vitis, polygoni, an. ʒij. tutia præp. cerussa, an. ʒß. litharg. auri*

auri ℥j. *antimonii* ℥iij. *ceræ q. s. ol. ros. & myrtill. fiat Cerat.* Our Dispensatories abound with Compositions fit for your purpose, as *unguent. album camphor. diapompholyg. tutiæ, desiccativ. rubr. nutrit.* mixed with *populeon*.

Herpes Miliaris requireth a more powerful exsiccation; viz. *℞ pingued. porcin. vitulin. vaccin. an. ℥ss. fol. alelutæ, chelidonii, sedi minoris, plantag. ling. canis, an. M. j. calcis ter extinctæ ℥ss. chalcantbi pulver. ℥j. flor. æris ℥iv. omnia ad invicem conquassentur, & simul dimittantur marcescere per hebdomadam; postmodum addantur aq. plantag. & suc. granator. an ℥iv. deinde bulliant lento igne usque ad consumptionem aquæ & succi, & colentur; colatura adde lithargyri aur. & argent. an. ℥iv. boli armen. minii, an. ℥j. pulv. cort. granat. ℥ss. terebinth. clarissimæ ℥iij. iterum bulliant, & cum cera alb. fiat Unguentum.* Or, *℞ axung. porcin. ol. laurin. an. ℥ss. unguent. rosat. ℥iij. auripigment. ℥ij. Merc. sublimat. ℥ss. argenti vivi saliva jejuni extincti ℥ss. lithargyr. auri, argenti, & cerussæ, an. ℥iij.* Misce in mortario marmoreo pro usu. *Merc. dulcis, Merc. præcipitat. arcanum corallinum* mixed with *unguent. rosatum*, have sometimes served me to good purpose in the curing of this Disease in Children and tender Bodies; but in the more rebellious sort we foment them with good *Lixivium* or an ablution of Turbith. Spirit of Vitriol and the Causlick-stone it self may also be necessary. And this is it which makes an *Herpes* in the Face so hard of cure, we not daring to apply such Corrosives there, especially not on the Nose, where the Cartilages and Bones lie so near the Skin.

1. Observat. of an Herpes behind the Ear.

A Girl of about six years of age was brought to me with many small angry Wheals rising behind her left Ear and down that side of her Neck towards that Clavicle, with an Inflammation about them. I applied an *Empl. de cerat. ad herpetem*, to assuage the Heat, and defend her cloaths from sticking to them, and advised her Mother to keep her warm. A few days after they brought her to me again. The Inflammation was then going off, and the *Pustulæ* on the lower parts burst; but those behind her Ear were white, and full of Matter. I opened them all, and discharged the Matter, then dressed them with *unguent. tutiæ* upon Pledgits of Lint; by which in three or four days after they were dried up and cured.

2. Observat. of an Herpes.

A Gentleman of about fifty years old, through some disorder in Diet, heated his Blood, and was indisposed with a Cough and Shortness of Breath: he had also many Pustules risen upon his Breast, Back, and Sides, with an Inflammation partaking of an *Erysipelas*. I let him blood about ten ounces, and prescribed him a Clyster, also a pectoral Ptisan, and desired him to forbear strong-Drinks, and to make his Diet of Water-grewel, Panado, and the like. I sent him some of my lenient Cerote to apply, in case any of the Pustules should matter and stick to his linen. Three or four days after they came to maturity, and brake, and dried as the former: while they dried, he was purged with Whey and Manna, and a few days after was well and abroad.

3. Observat. of an Herpes.

A young Gentlewoman of about eighteen years of age, upon a suppression of the *Menstrua*, was afflicted with many angry *Pustulæ* on her right Hand, from her Wrist to her Fingers-ends, which by ill treating ulcerated into one another, and excoriated all over. I dressed them with *unguent. album champhorat.* beaten up with *album. ovi*, then let her blood in the Arm, and advised her a Clyster of Milk and Sugar. The next day I purged her with an opening Apozeme, such as is proposed in the Chapter of the *Itch*; which she repeated often. The day after her first Purge I looked upon her Hand, and finding it all mattery, bathed it with a Decoction of *polygonum, summitat. equiseti, rubi, &c.* then dipt cloths in some of the same, and rowled up each Finger by it self, leaving a space here and there between, on which I applied Pledgits spread with

unguent.

unguent. de lithargyro. I dressed up the Hand after the same method, and advised her to renew the Dressings thrice a day. By this and other drying Waters it cicatrized here and there; but then an Inflammation arose above the Wrist with many Wheals. Upon the sight of which, I gave her *℞. calomel* over night, and a draught of her purging Apozem in the morning. By the repeating it three or four times, with intermission of some days, I took off the Fermentation in her blood; and by the bathing that Hand and Arm with *lac butyratum*, and dressing it with *unguent. de lithargyro*, and such-like, I cured her. It being then the season to drink the Waters, I recommended her to *Epsom*, and from thence to *Tunbridge*: they passed well, and she recover'd her perfect health.

A Person of Honour, of a full Body abounding with sharp Humours, was seized with an *Herpes* on his right Leg. I dress'd it with a mixture of *unguent. nutritum* and *populeon*, and proposed Bleeding and Purging: but we being upon a March, our lying in the fields the nights and marching all day was inconsistent with such Rules; whereupon it inflamed and swelled very much, many Wheals arose, and fretted one into another, with great Excoriation. I fomented the Leg in the mornings, and sometimes in the evenings, (as we had time) with a Decoction of *polygonum*, *plantag.* *equiset.* *flor. ros. rubr.* and dressed it with *unguent. album. camphorat. cum albumine ovi*, with an addition of *unguent. tutiæ*, spread upon little pieces of linen, and laid on at such distance as the Matter might get out between, then rowled on a Compress press'd out of the Fomentation. But the Fluxion was so great, and the Matter so very sharp, that for a while it would yield to no Applications. But after he had the conveniency of a Coach to rest his Leg, I made a shift to cicatrize the Ulcerations by applying bits of Linen dipt in the aforesaid Decoction, and laying Pledgits spread with *unguent. tutiæ*, &c. upon the edges of the Ulcerations over the Linen, with Compresses and Bandage. The Matter was well discharged between Dressings, by which means the Ulcer was digested and healed.

Of the Cure of these Ulcerations with *Intemperies Humida*, you may read more particularly in their proper Chapter in the Treatise of *Ulcers*.

One came to me having an extreme Itching in the Palm of one of his Hands. I looked upon it, and saw many small white Wheals scarce discernable: those which he had scratched had small Scabs on the heads of each, one of them like Millet-seed: they seemed dry, but were encompassed also with Wheals, and did all itch very much. He had also somewhat of the same *Herpes* on his Thumb and Fore-finger of the other Hand. I purged him with *pulv. cornach.* and sent him a pot of the *unguent. calcis* prescribed in the method of Cure to dress them with. I afterwards purg'd him with *pulv. cornach.* and *Merc. dulcis*; by which, and the addition of a few grains of *Merc. sublimat.* to the aforesaid Unguent, the *Herpes* was dried up in the several Parts.

A Woman came to me with an Ulcer in the Sole of one of her Feet. It was an unequal dry Ulcer, eating into the Skin to the Flesh of the compass of Half-a-crown: it was not much painful or inflamed, otherwise than as she heat it by walking on it. I caused it to be wash'd with an Ablution of Turbith, and applied *unguent. calcis* upon it, and afterwards purged her with Catharticks and *Calomel*. Thus the Ulcers dried, but afterwards rose again in the ragged lips. Upon sight whereof, I rubbed those lips all off with the Caustick-stone so far as I could judge any of that Humour lurked; then applied *unguent. basilicon* hot upon Pledgits, with some of the abovesaid Cerote over all. The third day after, when I thought to have seen a deep Ulcer, I found it flat and dry; and, scraping off the Ointment, I also brought off the Slough, and saw the Skin smooth, and even perfectly well: by which it was evident that the Disease was only in the Skin.

A Gent-

7. Observat. of Herpes Miliaris and a Simple Herpes.

A Gentlewoman about fifty years of age, upon the ceasing of the *Menstrua*, was afflicted with an Itching on the right side of her Head above her Ear. It growing vexatious, and not yielding to common Remedies, she came to me. It was an *Herpes Miliaris* about the breadth of an Half-crown-piece amongst her Hair. Her often scratching it had exasperated it, and the sharp Humour which issued from it had fretted the Skin behind her Ear downward, and in progress of time that became serpiginous, and was, when I saw it, covered with white branny Scales. The Humour dropping down from these, had then inflamed the Parts beneath, and many fiery *Pustulæ* were there risen, which spread down to that Clavicle. I dressed these latter with *cerat. Galeni*, let her blood that evening, and the next morning purged her with Whey, Manna and *crem. tartar.* and that afternoon, when her Physick had done working, I dressed the *Simple Herpes* with the Cerote as before; then clipt off the Hair from the *Herpes Miliaris* and Parts about, and with a strong *Lixivium* bathed that *Herpes*, and washed off the branny Scales; then applied that Unguent with the *auripigmentum* mention'd in the method of Cure. It was very painful; but by twice applying, the malice of the Disease was extinguished; and afterwards, by anointing it with *unguent. rosatum*, the Pain was removed, and the *Herpes Miliaris* and *Serpigo* appeared well cured. The *Herpes* beneath mattered, and were dried up with the common Epuloticks. I then made her Fontanel's in her Legs; since which time she enjoys good health.

A Man long vexed with an *Herpes Miliaris* on the inside of his Thigh, was cured by the same Method.

CH A P. XVIII.

Of an Oedema.

HAVING shewed you how *Blood* and *Choler* become offensive when disturbed and thrown out of their proper sphere, I shall now proceed to speak of that Tumour which hath its rise from the *Pituita* or *Phlegm*, and is known by the name of *OEDEMA*.

Definition.

It is a soft cold Tumour without change of colour, pulsation, heat or pain, unless it be from the distension of the Part it affects.

Cause.

The Cause of *Oedema* is, as in other preternatural Tumours, Antecedent, and Conjunct.

The Antecedent Causes are either remote, as default in Diet, Air, Exercise, &c. also old Contusions, Luxations, Fractures, &c. or more immediate, as the pituitous Humour abounding in the Body.

The Conjunct Cause is the same Humour collected into a Tumour, which is done, for the most part, by Congestion; these cold Tumours being rarely made by Fluxion.

Prognostick.

Oedema in it self is not dangerous; People of gross Bodies and Good-fellows are frequently subject to them, yet live to old age. But in Consumptive and Hydropical Bodies it is of ill consequence, not as it is a Disease, but as it foreshews a decay of Native Heat. Those *Oedemata* that attend Accidents of Wounds, Fracture, &c. are not dangerous, nor difficult to cure: but if an *Oedema* grow hard and painful, there is fear of a *Schirrus*; or if it suppurate, of a long and tedious Cure.

In the Cure of an *Oedema* three things are required: first, preventing the generation of the pituitous Matter; secondly, evacuating the gross Humours that

that abound in the Body, which is the immediate Cause of the Disease; thirdly, the Cure of the Tumour it self, which is effected by external Remedies.

The first of these is performed by regulating the Patient in his manner of living; as in Diet, Air, Exercise, Sleeping, Watching, Passions of the Mind, &c. as, that his Bread be of pure Wheat, well baked with Correctives, as Carraway, Fenil, or Anise-seeds; that his Meat be flesh of good nourishment and easie digestion, Mutton, Veal, Pullet, Rabbit, Chicken, &c. that his Drink be Ale well boiled and medicated. Wine is also commended; but moderation in drinking is desired. The Air ought to be dry and heating, the very removal into hotter Countries being often the Cure of this Disease. Exercise is required, to stir up the native Heat, and to waste the Crudities. Sleep in the day-time is forbidden, and ought to be moderated in the night. Melancholy is to be avoided, and Venery if the Body be weak.

The second consists in prescribing such Remedies as may attenuate, open Obstructions, and evacuate the pituitous Humour. Bleeding is not always proper, yet may be admitted if there be *Plethora*. Purging is necessary, and in order thereto you may begin thus; *R. rad. apii, petroselini, an. ʒ ss. flor. persic. genistæ, an. P. j. senæ ʒij. salis tartari ʒij. agarici inclusi in nodulo ʒiss. zinzib. ʒj. coquantur in aqua font. ad ʒviij. colat. adde syr. de spina cervina 3x. pro duabus vicibus.* Or, *R. sem. carthami contusi ʒij. senæ ʒij. flor. sambuci, persic. an. P. j. fiat Decoct. in aq. font. & vin. alb. ad ʒiv. colaturæ adde aq. cinnamomi hordeat. cochl. iij. syr. ros. cum. agarico ʒj. Misce.* Or you may purge him with this following Apozem; *R. rad. ireos ʒj. cort. inter. sambuci, ebuli, an. ʒ ss. rad. fœniculi, petroselini, an. ʒvj. summitat. centaur. min. agrimoniz, marrubii alb. an. M. j. flor. genistæ, sambuci, an. Mss. sem. fœnic. carui, an. ʒiss. fol. senæ 3x. turbith. sem. carthami, an. ʒij. fiat Decoctio s. q. vini & aquæ ad 3. part. stent in infusione per noctem; mane colentur ʒxij. R. colaturæ ʒiv. syr. de spina cervina ʒj. Misce; fiat haustus; reiteretur per aliquot dies.* The stronger Catharticks are, *pil. è duobus, extract. rudii, pil. cochiz minor. pulv. diaturbith cum rhabarbaro, diasen. cornachin. &c.* Six drachms of *Electuar. caryocostin.* is a good Purge for the poorer sort. Vomiting is of great use: and, if the Tumour be in the inferiour or remote Parts, it may be as useful for making of Revulsion, if the Patient labour not under a *Phthisis*. Your Vomit may be *oxymel scillit.* or the Emetick Wine, *sal vitrioli, &c.*

You are also to have regard to the weakness of the Stomach, and endeavour the strengthening it, not only by outward Applications, as Fomentations of *absinth. card. benedict. scord. cassia lign. calam. aromat. &c.* but also with stomachical Unguents and Emplasters, of which you may find sufficient set down in the *London Dispensatory*. Cordial Electuaries and Digestive Powders are also useful, whereof I shall give you some. *R. conf. anth. ʒij. cort. citri condit. ʒ ss. nuc. moscat. condit. ʒvj. spec. diarrhod. ʒij. cum syr. de cort. citri & syr. gariophyl. fiat Electuarium;* of which the Patient may take the quantity of a Nutmeg often in a day. Or this; *R. sem. anisi & fœnic. cond. an. ʒj. coriand. & carui condit. an. ʒiss. cinnam. pulv. ʒiv. spec. aromat. rosat. ʒij. fiat pulvis.* A spoonful of this may be taken after Dinner, or at any other time. Also Decoctions of *sarsaparilla, lign. guaiaci, sassafras,* with Antiscorbuticks, &c. adding Wine, *aq. mirabilis,* or the like Cordial-water to it, to make it more grateful and hearty in the Stomach.

The third concerneth the handling of the Tumour it self: and that varies, according as it is in its beginning, state, or declination.

In the beginning, the Medicaments may be such as do moderately repell, not violently, lest the Humour of which the Tumour proceedeth, being for the most part gross, be thereby made more tough: besides, Repellents are not so

proper in congested Tumours. When we use them, it is rather to strengthen the Part, than to repell; therefore we mix with them such as have an attenuating and discutient faculty. One of the milder is Bay-salt with Oil of Olives. In small Swellings proceeding from the weakness of the Part, Brandy-wine, or a Solution of Bay-salt in *Spanish Wine*, or the Party's own Urine, may serve sufficiently to attenuate and dry up the Humidity, and strengthen the Part.

In the state when the Tumours are large, they require Medicaments more resolvent and discutient: and the better to dispose them to rarefaction, you may begin with such a Fomentation as this: *℞ summitat. absinthii, abrotoni, origani, calaminthæ, pulegii, sambuci, chamæmeli, rutæ, salviæ, an. M. j. bacc. lauri, juniperi, an. ʒj. sem. fœniculi, dauci, carui, cymini, an. ʒiʒ. contundantur crasso modo, & in aq. q. s. bulliant ad dimid. partis consumptionem; colaturæ adde spir. vini q. s. fiat Fotus.* After which, you may embrocate with this; *℞ ol. laurini, rutacei, de castoreo, an. ʒij. salis marini ʒij. Misce:* and apply this Cataplasm: *℞ farina fabar. hordei, an. ʒvj. summitat. absinth. rutæ, origani, abrotoni pulv. an. ʒiʒ. flor. sambuci, chamæmeli, ros. rub. pulver. an. ʒiij. coquantur in prædict. fotu ad cataplasmatidis consistentiam, addendo in fine aluminis & sulphuris vivi an. ʒj. olei rutacei & mellis com. q. s.* If these be not enough discutient, you may make the former Decoction in a *Lixivium*, and the Cataplasm in the same, and embrocate with such-like: *℞ ciner. brassicæ ʒij. unguent. dialthæ ʒiij. ol. cham. chimic. ʒj. Misce. Emplast. de minio cum sapone, Emplast. diasulphur.* are also proper to discuss these Tumours.

In the declining of the Tumour foment with such things as may be discutient, and corroborative to strengthen the Part: *℞ summit. origani, majoranæ, flor. anethi, cham. ros. rubr. an. M. j. balauft. nuc. cupres. calic. gland. an. ʒiʒ. calam. aromat. ligni aleos, an. ʒij. coquantur in vino rubro, & fiat Fomentum.*

Bandage is of great help in the cure of these pituitous Swellings: indeed we can do nothing considerable without them. Those I especially recommend to you are the laced-stockin, Trowse, Sleeve and Glove. They, as fitting most firmly, may be worn with the greatest advantage, and with the least trouble or prejudice to the health of the Patient; yet do they require your consideration and care how they be laced: for by the unequal hard lacing of them you may raise a Tumour, and by an equal over-streight lacing you may emaciate the most fleshy Leg. Many Instances may be given of the former, and I shall give you one of the latter.

A Person of a sedentary life, who had been vexed with an Ulcer in one of his Legs, was advised by his Chirurgeon to wear a Laced-stockin: and having thereby cured the Ulcer, he thought fit to continue the use of the Stockin some while, which he did: but minding more his Study than his Leg, he laced the Stockin every morning streighter, till his Leg became so weak that it could scarce support his Body. I was fetch'd, and surprized to see his Leg so dwindled away, wondering how he could lace it so small without causing Inflammation, or indeed suffer it to be so extenuated without taking more timely notice of it. I presently caused the Stockin to be unlaced, and his Leg to be bathed with warm Water, and embrocated with *ol. lumbricor.* by which it plumpt again in few days, and recover'd its former strength.

i. Obser-
vat. of a
Swell'd
Hand.

A Gentleman of about thirty years of age, having laboured long of a Quartan Ague, was afflicted with a phlegmatick Swelling in his right Hand from the Fingers-ends to the Arm, as full as the Skin could hold, both Back and Palm, the Joints stiff and useless. The Tumour was painful, by reason of the great distention of Parts, and was thereby rendred hard, yet yielded to the impression of my Fingers. Doctor *Lenthall* had purged him frequently, but the Tumour

Tumour not yielding thereto, he put him into my hands. I began my work with the milder Fomentation prescribed in the method of Cure, and embrocated it with *ol. cham. & rutac. cum sale com.* applied over the whole Swelling *Eplastr. diasulphuris*, rowled it up, and placed it high up to his Breast. I continued this method some days without much advantage, then left off the use of the Emplaster, and applied a Cataplasim *ex far. bordei*, &c. as it is set down in the Method of Cure, and continued the Fomentation and Embrocation; by the use of which, the Tumour did somewhat discuss. But, according to my long Observance, these crude Tumours cannot thoroughly discuss without the help of a more strict Bandage; therefore having thus disposed them for Bandage, I caused a Glove to be made of strong Leather, slitting the back and fingers, and making Eye-let-holes to draw it close. Then having applied the Cerote above prescribed, with a compress of Cloth over it, and a piece of Vellum to defend the Hand from the Lace, I laced the Glove on moderately streight to the ease of the Patient, and streightned it still daily. But from that time I did not dress the Hand more than once in four or five days, and then I fomented and dress'd it as I had done before, laying Compresses upon the Palm of the Hand, and elsewhere, as I saw occasion. As the Swelling diminished, the Glove became too big; we therefore put on another less, and began again to purge him, and prescribed him *decoct. sarsæ lign. guaiaci*, &c. and from that time we purged him once a week with *extract. rudis & calomel.* By this method I discussed this Tumour in the midst of Winter, he not keeping his Chamber but when he took Physick: yet there remained a stiffness in the Joints of the Wrists and Fingers, and the Arm was extremely emaciated. For the nourishing of it, I made a Fontanel in that Arm; and in order to the relaxation of the stiffness of the Joints of his Hand, I fomented them with emollient Herbs boild in Flesh-broth, and embrocated them daily with *ol. lumbricor.* applying a Cerote of *unguent. dialtheæ* and Wax over all: his Hand was also sometimes put into Grains, or a Beast's Belly. After which we dressed his Hand, and laced on the Glove, as before we were accustomed to do, and directed him to wear a furr'd-Glove to keep it warm. By this method his Arm grew fat, and his Hand flexible and strong before *March.*

A Widow-woman aged fifty-six years, of a gross Body, having been long subject to Swellings in her Legs and Feet, was at last thereby confined to her Bed. They were pitted, and yielded to the impression of my fingers; yet were hard, and somewhat inflamed, and painful: which latter was occasion'd, I suppose, from the extraordinary influx of Humour. I purposed to have begun my Cure with Purgatives: but she, having no use of her Legs, would not be persuaded to Physick. I fomented her Legs and Feet one after another with the milder *Fotus* prescribed in the Method of Cure, embrocated them with *ol. cham. lilior. cum aceto*, and applied a Cerote of *unguent. dialth.* with an addition of Wax, and 3j. of *ol. cham. chymic.* with good Bandage from the Toes to the Knee. I repeated this way of Dressing twice a-day, till I had mollified and resolved somewhat of the Tumour and Hardness; then made the Fomentation more discutient by the addition of Salt and *Sulphur. viv.* and some days after caused a pair of Laced-stockins to be put on, and laced them daily streighter. But from that time I dressed her Legs but once in three or four days, unless it were that the Skin were fretted by the Salts, or her scratching them: in which case I took them off, and bathed her Legs with warm Water, and applied *cerat. Galeni* on them. Thus her Feet and Legs were made less, and her Stockins taken-in accordingly, till the Swellings were quite discuss'd, and her Legs and Feet restored to their true shape, which was in less than eight weeks; during which, I purged her with that Apozem prescribed

2. Obser-
vat. Of
Swell'd
Hands.

in the Method of Cure, and made her Fontanels in her Legs, and continued the use of the Laced-stockins. I thought this Widow had been dead, till the last Summer she sent to me for an Emplaster for a pain in her Shoulder ; it being the Year 59. in which I cured her.

3. Obser-
vat. Of
Swell'd
Legs, &c.

A Person of Honour about fifty years of age, of a corpulent full Body, whom I had seen many years before in *France* afflicted with pituitous Swellings in his Legs and Feet, came over into *England*, and put himself into the hands of Sir *Fr. Prujean*, he then labouring under a complication of Diseases, of which those Swellings in his Legs and Feet were only a Symptom. By Chalybiates and Antiscorbuticks he was relieved, and restored to a tolerable good health : but those Swellings in his Legs did not lessen. Upon which consideration I was sent for, and proposed the Laced-stockins as the only Remedy. It being allowed of by the Physician, I fomented his Legs with the milder Fomentation above prescribed, embrocated them as abovesaid in the preceding Observation, and rowled them up from the Feet above the Knees. After three or four days I put him on Laced-stockins with Knee-pieces, and by a moderate lacing of them restored the Legs and Feet to a better shape than they had been in many years before, and he enjoyed a better health. After the wearing them some months longer, his Legs grew so well, that he frequently discontinued the use of them many months : yet when he perceived any fulness in them, he did put them on again, without advising us about it. Nine years after this Person was diseased with a Carbuncle : after the curing whereof his Legs, Thighs and Belly swelled extraordinarily. By Purging and Antiscorbuticks his Belly sunk ; and by Laced-stockins and Trowzers the Swellings in his Legs and Thighs went off, and they continued well without farther use of the Laced-stockins, he enjoying a good health some years afterwards.

4. Obser-
vat. Of
a Swell'd
Thigh.

In the time of the last great Plague, while I was in the Country, I was fetch'd to a Person of Worth, of about seventy years of age, lying in bed diseased with a cold phlegmatick Tumour in his right Thigh, soft, and yielding to the impression of my fingers. Doctor *Bowles* had been with him, and prescribed a Fomentation with Embrocations to be daily applied. I approved of what had been done : but the Weather being then extreme cold, the ground cover'd with Frost and Snow, I thought he might get cold in the time of Dressing ; and besides, without a strict Bandage it was not likely to remove that Tumour. Therefore I offered to their consideration, whether a Flannel-Trowze might not be made to lace streight upon that Thigh, to cherish the native Heat of the Part, and deferr the Cure of the Tumour till the Spring. The Patient approved of it, and declared that he would return to *London* about that time, and consult us there, in order to his Cure. This being his resolution, I directed his Servants to make a Trowze of a fine Dimity, lined with a soft Flannel, with Eye-let-holes, to lace on the outside, with a Waist-band fitted to the upper part of it. The Trowze being made, I saw it laced on, a piece of *Spanish* Leather being placed under the Lacing, to defend his Thigh from being hurt by it. The lower-part of the Trowze was tacked to a Cotton Stockin he put on that Leg. I desired (in case that Leg should swell) they would put on a Laced-stockin, with a Knee-piece. After I was gone, there were some Objections made against this Bandage : but the Patient, finding ease by it, continued the use of it, and came to *London* in the Spring of the Year, and sent for Sir *Fr. Prujean*, Doctor *Bowles*, and my self, to meet Sir *Edward Alston* and Mr. *L.* a Chirurgeon, at his house, to consult his health. We met, and found the Patient walking in a large Dining-room. He gave us an account of the Swelling in his Thigh, and how it was cured by the Bandage I had directed, in the Country. He also related to us how he had been over-persuaded to have the Calf of
that

that Leg blister'd, and of the pain it gave him, and that a Fontanel had been made in the same Leg; which he was also forced to heal up, by reason of the pain. (These were made after I had been with him.) He farther declared the Objections had been made against the Bandage, and said, he had therefore sent for us together, to have our Opinions how to regulate himself for the future. The Physicians did all approve of the Bandage, and allowed his wearing Laced-stockings on his Legs in case they should swell, and prescribed him a stomachical Pill, and some pectoral Syrups, to take for a Cough he was subject to. Some while after the Patient's Legs swelling again, I put him on Laced-stockings, which he did wear till they recovered their tone. Afterwards, as occasion offer'd, he wore them, or left them off. During the time he wore them, he commonly bathed his Legs with warm Water at night (by my direction) once a week to refresh them, and put fresh Stockings on the next morning. Thus he lived happily some years, and died of Old age.

A Youth aged about fifteen years was diseased with the Small-pox, and soon afterwards with a *Rheumatismus*, which especially afflicted the *Scapulae* and right *Isthion*. During these Distempers, the Physicians endeavoured by frequent Bleeding, Sudorificks, &c. to take off the Ferment in the Blood: but the Pain encreased, and that Leg swell'd from the Hip to the very Toes exceedingly, and seemed Oedematous. On each of the *Scapulae* there also appeared a large Tumour without Inflammation. These latter we judged to be full of Matter, and accordingly I opened them by Incision, and discharged a great quantity of purulent Matter. We dressed them with *unguent. basilicon* upon the Pledgits. The Swelling in the Leg we stuped with a Decoction of warm Plants in a common Lixivie, adding to it some Brandy-wine. After we had well fomented it, we embrocated the whole Member with *ol. olivæ* and a Solution of common Salt; then rowled it from the Toes up to the Hip, and placed the Foot and lower-part of the Leg so high upon Pillows as might hinder the descent of the Humours. We also laid him upon his left Side, to give ease to a large Ulceration upon the *Os Coxendicis*, which was occasion'd by his long lying upon that Part. After we had thus dressed him, my Kinsman *Jacques Wiseman* took the Care of him, and in four or five days removed the Swelling out of the Foot, Leg, Knee, and lower part of the Thigh, to the great ease of the Patient: but the while the upper part of the Thigh and Hip swelled the more; also an Anasarcous Tumour stretched the *Scrotum* to such a bulk as hindred his lying longer upon his Side. At the sight of which I scarified it with a Lancet gave vent to that serous Humour, applied a warm Stupe on it wrung out of the fore-mention'd Decoction, and thereby freed the *Scrotum* so perfectly well as it became no more diseased. The Abscess in *Scapulis* continued to matter much, and the Bones were felt bare in both of them: but upon making new Apertions in the Parts more declining, the Matter discharged easily, and they cured within three weeks after. But in the mean time the Tumour in the upper part of the Thigh became painful daily more and more. Feeling Matter fluctuate in it, we opened it by Incision, and discharged a large quantity of Matter indifferently concocted: yet we could not by search of Probe discover any *Sinus* considerable; but, by pressure with our hands upon the *Os Sacrum* and back-side of the *Ilion*, we saw the Matter flow fresh out of the Abscess: upon which account care was taken to make Compressure by Bandage upon that Part. While this Abscess became the care of the Chirurgeons, there was consideration had of Internals, to dispose the Humours to a healing condition. But, alas! he was so emaciated, weak and restless by reason of new Ulcerations which were risen upon the *Os Coccygis* and both Hips, that we only prescribed him good Broths and such Meat as might nourish

5. Observat. Of an Oedematous Swelling with Apostemation, &c.

nourish him ; and at last, for his more ease, we placed him directly upon his Belly ; and thereby the Ulcers which had been made by lying on the places aforesaid were disposed to cure, and the Matter which lodged deep in the upper part of the Thigh and *Ischion*, &c. by this position made its way down by the *Os Ilium*, and flowed more plentifully. Upon sight whereof, that Opening was enlarged about two or three inches, for the more free discharge. From that time the Matter daily lessened, and accordingly the Tumour diminished, the Abscess and external Ulcerations healed, and the Patient visibly recovered his strength, inasmuch that we hoped our work had been well-nigh at an end. But he not being able to lie so long upon his Belly, the Ulcerations on his Back and Hips encreased, and proved exceedingly vexatious ; also the Swelling upon the *Ischion* grew big, and so painful, that it contracted that Leg. Fomentations and Cataplasms powerfully discutient and resolvent were for some time applied : they proving ineffectual, we applied a strong Caustick on the middle of that Tumour, and cut into it : but it appearing dry and callous, we filled up the Apertion with Precipitate. While we were digesting out that *Callus*, embrocations were used to the contracted Tendons, and the Ulcerations, &c. were daily dressed, whereby in the space of six weeks they were all cured, and the Patient restored to the use of that Leg ; but as yet he makes use of Crutches to support his weak Body.

6. Observation. Of an Oedema in the Thigh.

I was sent for to an Infant of about a year old, diseased with a soft white Tumour in the midst of her right Thigh, yielding to the impressions of my fingers : it was of a very large size, without much complaint of pain. I embrocated the Swelling with *ol. ros.* and Bay-salt, and applied an Emplaster of *diachyl. ireat. cum aceto*, with Bandage over it. After a few days continuance of these Dressings, finding the Tumour not to lessen, I fomented it with the milder Discutients set down in the Method of Cure, and applied *Emplast. diasulph.* by the use of which it seemed to dissolve ; but afterwards it encreased again, and became hard, of a dusky colour, and as it were fixed to the Bone. Then I applied a Cataplasm *ex mucilag. rad. althææ, lilior. sem. lini & sænugræci*, &c. endeavouring Resolution : but it inflamed, and suppurated deep amongst the Muscles. I continued Suppuratives, and after a few days, the Matter being more concocted, opened it, and gave vent to a foetid Matter ; then dressing up the Abscess with *unguent. basilicon* upon a Tent, I embrocated it with *ol. ros.* applied the same Cataplasm, and afterwards deterged it with *mundif. Paracels.* and incarned and cicatrized it as hath been said in large Phlegmons.

7. Observation. Of the King's-Evil in the Thigh.

A poor Woman brought a Child to me, diseased, as she was told, of the *King's-Evil* ; (as indeed now-a-days every Disease that appears dangerous or difficult of cure is sent to us as the *Evil*.) He was about six years of age, and had a large Tumour on the inside of his right Thigh. It was not the *Evil* ; but, the Child seeming an Object of Charity, I offered her the Cure of it ; and at the same time, while the Child lay upon the Table, I made Incision into it without asking leave, and discharged, I believe, near a Chamber-pot full of a crude Matter ; then dressed it up with Pledgits of *unguent. basilicon* and *Emplastr. diachalcit.* with Compress and Bandage. The second day she brought him again to me, and then the Skin seemed much contracted ; yet it bagg'd, and had near a Porringer-full of Matter in it. I laid it open that way with a pair of Probe-scissors, and dressed it afterwards once more. My Servants from that time continued to do it, till she thought she could cure it her self.

8. Observation. Of Phlegmatick Tumours in the Thigh & Ischion.

A Child of about four years of age, having been seized with a Fever in the Autumn, languished the Winter following under various Diseases, and was lame by reason of some Swellings about the right Hip and Thigh. Dr. Denton was his

his Physician, who having recover'd the Child to a tolerable measure of health, took me along with him to consider those Swellings. There was one round Tumour near the Hip, the other was on the fore-part of the Thigh, very large: they had all the signs of flatulent Tumours (except the Sound.) We applied *Emplastr. diasulph.* and put on a Laced-trowze with a Compress upon the Tumours, and deferred the farther prosecution of the Cure till the Weather grew warmer; and then, finding the Tumours unresolved, we fomented them with Discutients boiled in a common *Lixivium*, and repeated the use of the former Emplaster, by which the Tumour on the outside discussed, (if it did not pass its Matter into the other:) which soon after I opened in the most declining Part four fingers breadth above the Knee, and, instead of Wind, discharged a large Porringer-full of a clay-colour'd fœtid Matter. The Opening was made by Caustick: it served for the easie discharge of the Matter, which after a few days lessened, and by Compression the Part agglutinated above, and cured without farther enlarging or putting in a Tent.

A Gentleman of about thirty years of age, having from his Youth been vexed with a fistulous Ulcer in his right Testicle, in progress of time a Tumour arose in the lower Belly over the *Pubes*, stretching to the right Groin. He consulted Mr. *Jenman* and my self. The Swelling was hard and painful, but without Inflammation. We supposed it to rise from an effusion of *Serum* through all the hypogastrick Arteries. That of the Testicle we believed to come from Juices cast in by the spermatick Vessels, which, meeting with a check in their progress, made the whole Testicle scirrhus, and the Ulcer, as I said, fistulous. We begun our Applications to the Tumour with a discutient Cataplasm *ex far. fabar. hordei, sem. lini, sænugraci, flor. sambuci, cham. pulver. in oxymel.* hoping to scatter the Humour: we also endeavoured Revulsion by Venæ-section, Clysters, and lenient Purgatives. Doctor *Short* was consulted and assisted all along in the Cure. While we were endeavouring to discuss the Tumour, it began to inflame, and tend to Suppuration. Upon sight whereof we suppurated it, and opened it by Caustick about two inches long near the *Os Ilion*, and discharged a large quantity of Matter. As the Escar separated, we endeavoured Digestion, and cherished the Parts by good Fomentations, adding Compress and Bandage to press out the Matter; the Physician having the while prescribed a *decoct. sarsæ, chinæ, &c.* with proper vulnerary Plants and Balsamicks, purging by intervals. Yet notwithstanding these Endeavours, the Abscess became more sinuous, and put us upon a necessity of laying it open the whole length as it lay transverse the Belly. The Matter was thereby more easily discharged; but, by reason of its virulency, it corroded under the lips of the Ulcer, rendring them sinuous and jagged, and the *Peritonæum* bare in some places. The least application of a Catheretick exasperated it, &c. The rubbing of a callous Lip with the Caustick-stone gave him a fit of the Colick. Upon which considerations we exhibited a few grains of Turbith mineral, which gave him three or four Vomits. By the repeating of that sometimes he salivated, and the Ulcer afterwards became well-disposed and cured. The Testicle was grown to the *Scrotum*, and passed its Matter through it in two several places: there was also another *Sinus* which passed through the body of the Testicle downwards. We had been some while endeavouring to consume the Callosities of these by Emollients outwardly applied, as also by Catharticks inwardly upon Tents into the Uleer: but failing in the latter, we laid open the *Sinus* on the side of the Testicle from one Orifice to the other, and digested and healed it; then pass'd a Seton-needle through the other *Sinus*, and made way beneath for discharge of the Matter. When that lower Orifice was digested, we pulled out the Ligature, and kept it open with a Tent,

9. Observat.
Of an
Oedema in
the Belly.

Tent, and thereby drained the Matter from the uppermost Parts, and cured the Testicle.

10. Observat. Of a Tumour in the Belly.

A Man came out of *Ireland* diseased with a large Tumour in the lower Belly deep under the Muscles, without Inflammation, Hardness or Pulsation: it was most prominent towards the left *Inguen*, and somewhat heated. The Tumour had been long growing, and of late very painful. I applied an *Empl. Cæsaris* over the whole Tumour, and fitted him with a Bracer to bear a part of the weight of it, designing that way to palliate it. By these he was somewhat relieved, and made a Journey with some of his Friends into the *North*, purposing to drink the Waters at *Knaresbrook*: but by reason of his Pain, he stopped at *Tork*; and, meeting with no hopes of Cure there, he returned hither, and sent for me. I went, and found him in his Bed full of Pain, and that part of the Tumour in the Groin swelled and inflamed, and full of Matter, as I thought: but, doubting the success, I desired he would consult some eminent Men of my Profession. He made choice of Mr. *Tho. Hollier*. We considered the situation of the Tumour, the time and manner of its growth, with the Symptoms all along attending it, and concluded it originally a Tumour by Congestion; supposing the Pain to proceed from some acrimony in the Serum, which falling into this declining Part, putrefied. Upon this Supposition we complied with the Patient and his Friends desires, opened the Tumour in that Groin by Incision, and discharged about half a large Porringer of a bloody Serum. We then laid it more open, and, observing nothing more to come forth, made a search with our fingers, and feeling nothing but Fat, dressed it up with Digestives *ex terebinth. &c.* with Emplaster and Bandage. The Patient was eased of his Pain, and rested well that night. The third day we met again, and found him as well as might reasonably be expected: but from the time we opened the Tumour he had not been out of his Bed. Taking off the Dressings, we found the Tumour sunk, and a little Matter from the lips of the Wound; but from the Abscess there was only a Gleet discharged. We fomented the whole Belly with *decoct. absinth. flor. cham. sambuci, &c.* made in Wine, and dressed up the Abscess with Digestives, as before. We were not satisfied with our work, yet had no Symptoms of its penetration: he breathed well, and his Urine and Stools were good. At our next dressing we saw the Ulcer had gleeted much, and the Opening appeared full of a greasie Fat soiled, as the *Omentum* will be after it hath been some time corrupted by the Air. We pulled some of it out, and, having made a Ligature under it, cut it off, and dressed up the Patient, as before. We were inclinable to think that what we had cut off was part of the *Omentum*: but then why should not the Intestines thrust out? To clear this Doubt, I brought the next day an Injection made of a Decoction of some Vulneraries, *ex rad. ireos, aristoloch. rot. myrrh. aloë, sarcocoll. mell. ros.* and a little *spir. vini*, and cast some of it up with a Syringe. It came out again. We repeated the Experiment, till we had well satisfied our selves that it came all out again: which confirmed to us that the Abscess was not within the cavity of the Belly amongst the Bowels. But the casting up of this Injection gave the Patient a Colick, upon which we used it no more. The lips of the Abscess digested well, but from within it only gleeted, and thrust out Fat, which we daily cut off without the loss of a drop of Blood, and dressed up the Abscess with *mundif. ex apio*, continuing the use of discutient Fomentations and Cataplasms. We very much desired to see our Patient up out of his Bed: but he apprehended that his Guts would tumble out; and the more Fat we pulled away, the more he desponded, and in the space of two months languished and died. I resolved to open his Body, and to that purpose made my Incision down from the *Cartilag. Ensisformis* to the

the *Pubes*, and from the Navel cross oyer. Then it appear'd plainly that the Tumour was made by abundance of a soft white greasie Fat lying between the *Peritonæum* and Muscles of the lower Belly. The *Peritonæum* was sound, not the least tainted, yet lay so bare, that the most curious Anatomist could not by Dissection more expose it.

If this Person had but rose out of his Bed to the Close-stool, nay, if he had but rose upon his Knees to Urine, the Fat had slipt out at the same time; for it lay loose floating upon the *Peritonæum*. After I had removed the Fat, I divided the *Peritonæum*, and there I saw all the *Viscera* sound and sweet as ever I beheld in any dead Body in my life.

C H A P. XIX.

Of a Scirrhus.

SCIRRHUS hath hitherto amongst Authors been reputed to have its original from Melancholy and tough Phlegm: the truth of which I dare not deny, before I know what is meant by those words. For in progress of Discourse the Writers upon this Subject do divide Melancholy into *natural*, and *preternatural*: a Distinction by whom begun I do not at present remember, but continued and used by all Writers of the latter Ages. Men that make this Distinction do suppose the *natural* Melancholy to be the terrestrious part of the Blood, but not yet to have exceeded the bounds of a sanguineous element: *preternatural*, to be such as hath contracted a more than ordinarily fixed or terrestrious quality by a fault in concoction: which if it be only a Humour so fixed, may be called preternatural Melancholy. If the Blood was very hot and acrimonious, it hath been presumed to be burnt, and hath gone by the name of Choler adust: but then it is not of the same kind or family. Of these more in the Treatise of *Cancers*.

I desire not to wade into Controversies of this nature, fitter for the Schools than a practical Discourse: it may suffice to give such a notion of Melancholy as may be agreeable to the common conceptions of Men versed in the faculty.

If we do derive our Notion, we may consider the Blood to be bred out of *Chyle*, which in the lacteous Vessels is white; but when it enters the Veins, it by degrees groweth to be pellucid, and then is call'd *Serum*, and in some cases *Pituita*; and at last, when it is red, we call it *Blood*. Which Blood consists of much Salt and Sulphur, without which neither the animal Spirits nor the solid Parts themselves could be made. According to the degrees of fixedness and volatility that these Salts and Sulphurs do acquire, the Blood is more or less florid, and the whole Habit of Body of a better or worse Constitution. If these Parts arrive to their due volatility, the whole Habit is Sanguine: if they be too fixed, it is Melancholick, according to the old phrase; which is indeed so far from being Adustion, that it is rather a Crudity, and the Body in this case differs from a Sanguine condition as a green Apple doth from a ripe one. It being the fault of the Blood that the *Chyle* having met with too great acidity the first concoction, doth not ever acquire a genuine ripeness, but is apt upon occasion to concrete it self upon the Fibres of the Tendons or Muscles outwardly, and upon the *Viscera* inwardly: which Concretion, where it happens, is that Tumour which we call *Scirrhus*.

The Differences of *Scirrhus* must be taken from the various mixture that happens in the Juices of the Blood. For Blood, being made at several times,

N

may

may partake of many several qualities; some of which may be produced in the mass of Blood, and some in the part it self, either by the peculiar Ferment thereof, or else by the alteration it may receive from applications of Medicaments. If a false Ferment in the Ventricle vitiate the Digestion, instead of good and laudable *Chyle*, we often find the product to be peccant, either in acidity, or acrimony, or some other quality. If it be Acrimony, when it comes into the Blood it produceth many hot Diseases, and often Cancers; of which more hereafter. If a meer crude Acidity, then the Body is liable to a *Scirrhus*: but that *Scirrhus*, according to the various mixtures it may meet with of Blood that went before, may be so compounded as to make those several Species which we call *Scirrhus*, *Phlegmonoïdes*, *Erysipelatodes*, *Oedematodes*, &c. Nay, though the whole Blood may be troubled with one uniform Distemper, which may dispose it to the raising of a *Phlegmon*, *Erysipelas*, *Oedema*, &c. yet the applications of Medicines to a Part so affected may be such, as, exhaling too suddenly the thinner Juices, may make the cruder portion that remains, instead of ripening into a due Digestion, harden into a *Scirrhus*: or else, by Medicines that cool too much, the whole Mass may be kept in its crudity, and so fixed in the Part as to become hard.

Signs. The exquisite or true *Scirrhus* hath no sense; the imperfect *Scirrhus* hath some sense, if it be pressed upon. The Tumour is hard, immoveable, and of a dark-red colour; if *Pituita* be mixed with it, then it is of a livid colour. If a *Scirrhus* be the original Disease of the Part, and not the effect of some other that hath been ill handled, it begins usually small like a Vetch or Pea, and by degrees encreaseth, without shifting or changing of place. If it be the effect of some other Tumour that terminated in it, as a *Phlegmon*, &c. then the Accidents proper to that Tumour did suddenly change into those of a *Scirrhus*: of which you may see more in their proper place.

Prognostick. The true or exquisite *Scirrhus*, being altogether without sense, admits of no Cure. The reason is, because the induration of the Part is so great, that it will not open to receive the free afflux of Blood into it, but keeps its own hardness in despite of all Applications, and thereby the use of Medicaments is rendered ineffectual.

The imperfect *Scirrhus*, which hath some sense, is not incurable, but yields by Resolution; though very often it terminates in a Cancer.

The *Scirrhus* which ariseth from *Pituita*, without change of colour in the Skin, if it be very big and hard, and have Hair grown upon it, is neither curable, nor yet doth terminate in a Cancer.

Cure. In the Cure of the *Scirrhus* three Intentions are required: The first is, in the regulation of Diet and manner of living: The second is, in the preparing and evacuating of the antecedent or peccant Humour: And the third is, in the application of external Medicaments.

In order to the first, the Air ought to be clear, and temperately hot and moist. Their Aliment such as may breed good Blood; as new-laid Eggs, Chickens, Pullets, Mutton, Veal, Lamb, Kid: and these boiled with Spinage, Borrage, Endive, Succory, Lettice, Sorrel, &c. are better than roasted. Their Bread ought to be of good Wheat, and well baked; their Drink a well-boil'd small Ale, or small White-wine, Rhenish, &c. Their Exercise moderate, and also their Sleep: their Mind chearful, free from care: and the Body soluble, by Clysters or otherwise.

The second Intention is, the evacuation of the Humour which aboundeth in the Body: whether, to use the vulgar phrase, it be *Pituita* or Melancholy that caused the *Scirrhus*; or that it proceeded from Obstructions of the *Menstrua*, or Suppression of the Hemorrhoids. If from any of these Causes
Blood

Blood abounds and be seculent, Phlebotomy is allowed, a Clyster preceding : but if Blood do not abound, forbear Bleeding, and proceed in preparing and evacuating the Humours.

The Preparatives thereto, according to the Ancients, were with *syr. de Jucco Borrag. buglos. sumariæ, lupul. de duabus radicibus, de pomis Byzantinis, &c.* in the distilled Water of the same Plants, or in Whey. But our Patients would think that time lost : therefore, instead of those Digestives, we purge with Minoratives ; viz. *decoct. senæ Gereonis, decoct. epithymi* ; also Decoctions of *castia, tamarind. &c. cum syrupis de pomis purg. &c. elect. diacathol. diaprun. solut. diacassia* ; and also *pil. de lapide lazuli, de agarico, aggregativ. &c.* These tough Humours require frequent Purging, but not by strong Catharticks : *confect. hamech* and *elect. diaphænic.* are of the strongest sort. If Phlegm abound, proceed as hath been proposed in *Oedema*, and forbear Bleeding.

The *Plethora* evacuated, you may endeavour Revulsion to the contrary Parts by Friction, Cupping, Fontanels, &c. In Obstructions of the *Hæmorrhoids*, Leeches may be applied ; and in suppression of the *Menstrua* a Vein may be opened in the Arm or Leg.

The third Intention is performed in treating the Tumour it self : in which these Directions are to be followed. First, that you do not use Repellents ; for cold and tough Humours, of which these Swellings are created, are not capable of returning back as hot Humours, but do encrease the more thereby. In the next place, you ought to be cautious in the use of Emollients alone ; for thereby they are frequently exasperated, and terminate in Cancers. You ought also to avoid the use of the stronger Discutients, lest thereby you resolve the serous thin Humours, and convert the grosser part into a more solid substance. Therefore you are to consider well the Habit of the Body, and whether the *Scirrhus* be recent or old, and what the Parts are that be affected, and proportion your Medicaments accordingly.

As to the Habit of the Body : young People, and such as live effeminately, require to be treated with milder Resolvents than those who live a labouring life. So also a *Scirrhus* in its recency, whilst it is in its augment, requireth milder Applications than the confirmed or inveterate one. And those *Scirrhi* arising in the Fleishy Parts will more easily resolve than those on the Ligaments and Tendons.

The milder Resolvents, are, *butyrum rec. adeps gallinac. ol. amygdal. dulc. lilior. adeps anser. anat. sebum vitulin. hircinum, vaccinum, axung. porcin. vet. rad. althææ, lilior. &c.* The stronger, are, *radices cucumeris agrest. bryoniæ, figil. Solomonis, ireos, pix navalis liquida, terebinth. gum. galban. ammoniac. bdellium, oppopanax, &c.* *Acetum*, by virtue of its penetrative quality, is properly mixed with other Medicaments in the resolving gross Humours.

Some Writers do not approve of Fomentations : but I have always found them necessary to dispose the Tumour to Resolution, and have ever begun my Applications with them, and do propose them to you. *R. rad. althææ, lilior. an. ℥iv. rad. cucumeris agrest. ℥ij. summitat. cicuta, M. ij. summitat. majoran. M. j. flor. meliloti, sambuci, an. p. j. sem. lini, sænugræci, althææ, an. ℥j. coquantur in s. q. aq. font. colaturæ adde aceti modicum.*

In soft Bodies, where the *Scirrhus* is recent, *R. rad. althææ ℥ss. rad. lilior. ℥iij. sem. lini & sænug. an. ℥j. coquantur in brod. ex capite & pedibus vervetinis, deinde pistentur, & trajiciantur per setaceum, addendo olei chamæmel. lilior. an. ℥ij. æsopi ℥iiss. Empl. diachyl. simpl. cum oleo lilior. solat. ℥iij. ceræ alb. q. s. fiat Ceratum.* *Ceratum hyssopi* is also proper to resolve these Tumours.

In dry Bodies, where the *Scirrhus* is more confirmed and fixed amongst the Ligaments and Tendons, the Fume of *acetum*, yea, *sp. vini* sprinkled upon a hot

Stone, are of a special virtue in resolving those Tumours : afterwards you must chafe the Part, and apply this or such-like : *℞ gum. galban. ammoniac. bdellii in aceto dissolut. styracis liquida, an. ℥j. diachyl. magn. ℥ij. ol. lilior. axungia anseris an. ℥j. cerat. œsypat. ℥ij. liquefiant omnia simul, & cum cera alba, fiat Ceratum molle.* If by the use of these Medicaments it tend to Suppuration, treat it accordingly : but beware that you be not deceived, and the Suppuration prove false, and terminate in a Cancer.

1. Observat.

A Person of Honour near forty years of age, of a full Body, had been long subject to Oedematous Swellings in both her Legs from the Knees downwards: for the remedying of which, many Applications had been made abroad during the time she was in *France*; but, by reason of her constant attendance there, they continued swelling, and in progress of time the Matter indurated and became Scirrhus, not only along her Shins, but the musculous Flesh on the Calves of her Legs and Ancles. The Cure was difficult; but she promising to keep her Chamber, I undertook it. She consulted Sir *Alex. Fras.* who prepared her Body by Purging, &c. After which, I began my work with the Fomentation set down in the Method of Cure, her Servants bathing her Legs with a Sponge morning and evening; after which they were embrocated *cum oleo ex ped. bovinis & ol. lumbric.* Then I applied a Cerote on them of *unguent. dialthææ* and Wax, and rowled them moderately on to retain the Dressings: after which she rested her self upon a Bed or Pallet daily. Whilst this Person was under Cure, there happen'd a private Dissection of a sound Body at our *Hall*, whence I collected a good quantity of Fat, which I clarified, and, after the fomenting of her Legs, I embrocated them with it twice a day: to which I imputed very much the Recovery; for from that time the Hardness visibly resolved, and in a Month's space they were restored. During this method of Dressing she was frequently purged, and a Fontanel made in each Leg. Suspecting her Legs might swell upon her first going abroad, I caused a pair of Laced-stockins to be put on, which she did wear some few days: but observing they did not swell, she not only left them off, but healed up the Fontanels.

2. Observat.

A Gentleman of about fifty years of age, by a Fall brake his Lower-Jaw, the Cure whereof you may see in the Treatise of *Fractures*. About half a year after the same Patient complained of a hard Tumour fixed under that Ear and *Maxilla*, of a dark-red colour, not so much painful, as uneasie from the hard binding of the Parts together. It was an imperfect *Scirrhus*, and not unlike to end in a Cancer. Sir *Charles Scarborough*, Physician to His Royal Highness the Duke of York, and one of His Majesty's Physicians, was consulted; and by his Prescription the Patient was let blood, and several times purged. I fomented the Tumour with the *Fotus* above-mention'd, and embrocated it with *ol. lilior. sambuci*, and *unguent. dialthææ*, applying *Empl. diachyl. cum gummi*, and afterwards a Cataplasm *ex sol. cicuta, rad. lilior. sem. lini, sænugraci*, &c. During these Applications, little hard Tubercles arose in the body of the Tumour, (as I have sometimes seen rise about the lips of inveterate cancerated Ulcers,) and after some days brake and gleeted, but would not digest. In the presence of the Physician I cut into them, filled them with Precipitate, applied *unguentum basilicon* on them, and continued the use of Fomentations, &c. The Precipitate not digesting them, I rubbed into them with a Caustick-stone, divided the Escars, and filled them with Precipitate; from that time hastening separation of the Sloughs. Then by the Vitriol-stone and Precipitate I deterged them. As these digested, the Hardness resolved, and I cured them with *unguent. tutia*. The Patient being cured, he sent for Mr. *Gosling*, to inform himself whether

whether any carious Tooth or Stump affected that Jaw. He pull'd out one; but whether that was the cause, I much doubt.

One of about fifty years of age, of a full Body, came to me with a hard Tumour of about four inches in length lying on the outside of his right Thigh, close to the *Musculus vastus externus*, of a livid colour mix'd with a dark red. It was occasion'd by a Fall upon a Threshold of a door, which bruised the Part, and, I suppose, made a large extravasation; which, for want of timely discharging, dried and hardened. The Tumour was sensible, but not otherwise painful than as it numb'd that side of the Leg, and so caused a Lameness. I began with Venæ-section, and purged him frequently with decoct. epithymi, &c. during which, I fomented the Tumour with the Foment proposed in the Method of Cure, and beat and pulped the faeces of it, and with farin. lentium & hordei cum axung. anseris & ol. lilior. made up a Cataplasm and applied it. I embrocated the bentumb'd Parts with ol. lumbricor. and made him a Fontanel on that side of the Leg. After I had continued these Applications some days, I added more Cicuta to the Cataplasm, and boiled it in Wine and Water. By the frequent application of the Cicuta the Skin was fretted; in which case I omitted the use of it, and applied the milder resolvent Emplaster set down in the Method of Cure, and embrocated the Tumour with axung. humana. By this method I resolved the Tumour, and dismissed him cured.

I could give you some other Instances of these imperfect Scirrhi; but they not differing in their Cure, I shall forbear, and conclude this Chapter with one Instance of a Scirrhus which may serve to shew what the Disease is when heightened by acrimony or evil quality.

A Gentlewoman aged forty-eight years, of a full Body, having been long diseased by immoderate fluxes of the Menstrua, and subject to Cough, with Shortness of Breath, &c. at length recover'd her health by the Prescriptions of Doctor Denton, and enjoyed it the space of a year; but was then seized with a streightness and pain in her right Breast; which encreasing much with Inflammation, she came again to her Physician, who sent for me. At the first sight it seemed to be a confirm'd Cancer fix'd to the Ribs: but upon more mature deliberation and handling of it, I found the Disease was in the Skin, and that the Glands and musculous flesh underneath it were not hard or otherwise affected than as they were bound in by the intense hardness of the Skin, which kept them immoveable. From that uneasiness an Erysipelas was raised, which overspread the Skin of the Breast and Parts about with great Heat. We supposed the hardness proceeded from a concretion of the nutritious Juices: but how to relieve her was the difficulty. We applied over the Parts affected cerat. Galeni to repress the Heat, and supplied her with Medicaments to dress her self, that she might, according to her desire, retire to her House in the Country, where she was let blood, and purged with manna and cremor tartar. dissolved in Whey; and her House being near Epsom, she was afterwards purged with those Waters. But, after all, growing more indisposed, she returned to London: at which time I saw her Breast inflamed and excoriated, also several hard Tubercles risen in the Skin which gleeted much. The Scirrhus was also spread up that side of the Neck by the Muscul. mastoïdes to the Os humeri and Scapula, and so under that Axilla, and down that side. We dressed some of the Excoriations with unguent. tutiæ Vigonis, and others with Pledgits dipt in this following Lotion; R. aq. spermat. ranar. ℥j. sem. cydon. ʒij. sem. plantag. ʒj. infund. calide per quatuor horas: colaturæ adde troch. alb. Rhas. pulv. ʒj. sacchar. Saturni ʒss. And over all we applied some of this following Cerote: R. mucilag. sem. cydon. psyllii extract. cum aqua solani, an. ʒiv. unguenti nutriti ʒiij. unguent. popul. ʒvj. ceræ albæ q.s. fiat Ceratum. Thus the In-

flamma-

inflammation was remitted, and the Excoriations healed in some places, and checked in others. Many internal Remedies were also prescribed, Emulsions, Cordials, &c. according to the Accidents which happened. During the while I was in the Country other Chirurgeons were consulted, but without success; the *Scirrhus* still spreading, over-ran the other Breast and side of the Neck, and in few weeks rendred her Neck stiff and immoveable: and, by reason of the Compression which was made in the *Axilla* and about the Shoulder, there was a stagnation of the Humours, and the Arm swelled to the Fingers-ends. We fomented the Arm with a decoct. fol. *Q. rad. althææ, fol. violar. plantag. solani, salicis, lenticula palustris, flor. cham. meliloti, sem. lini, fœnugr.* and endeavoured by Embrocations and Cerots, Emollients and Resolvents, to succour these Parts: but all this while she was either afflicted with Colicks, or *Diarrhœa*, or Vomiting. We endeavoured to carry off the Matter by *Calomel.* inwardly, and by Mercurial Unguents outwardly; and would have salivated her, if she would have permitted. The Weather growing hot, and her Lodgings being too streight, she removed again to her House in the Country, where she was visited by us; I saw the *Scirrhus* affecting both sides of her Neck, her Shoulders, Arms, Breasts and Sides, and beginning to invade the Skin of her Loins and Hips; yet she was not at that time sick or pained, but eat her Dinner well. She at length grew weary of Medicine, and with patience endured the remaining Accidents of her Disease till it kill'd her. She was seized with this *Scirrhus* in May, and died in August following.

CHAP. XX.

Of Warts and Corns.

HAVING run through the Discourse of *Scirrhus*, I shall make bold to add to it something concerning *WARTS* and *CORNS*, as being more reducible to that Head than to any other that I know: they being for the most part indurated Tumours; and tho' sometimes we find them soft, yet that is upon some admixture of an extraneous Humour that makes the Tumour compound.

Cause of Warts.

Warts and *Corns* are both of them cutaneous Tumours, but do differ from each other by this most essential Difference: A *Wart* beginneth in the *Cutis*, and seemeth to be either an efflorescence of the *Serum* of the Blood, which hardning in the surface of the Skin, maketh a dry Tumour; or else some small luxurancy of the little Arteries of the *Cutis*, which do thrust out themselves, making a pretty *Sarcoma* which we call a *soft Wart*. According to the variety of the Tumour, it is sometimes whole with a smooth surface, sometimes chapp'd and uneven. According to the manner of their production, sometimes they arise by a general exudation out of the *Cutis*, with a broad *basis*, and are call'd *Verruæ sessiles*; sometimes a few Capillaries putting out together, do, after they have grown to a small length, enlarge themselves into a greater compass, and make the pensile Tumour we call *Acrochordon*.

Differences.

Cause of Corns.

The *Corn*, on the other side, beginneth in the *Cuticula* with its *basis* outward, owing its origin to an outward Compression, and thence derives it self inward into the Skin, nay, often through it to the Membranes, Tendons and Cartilages, to which it frequently unites it self, to the no small disturbance of the Patient. It groweth in any Part that is liable to great pressure; the Toes and Feet, the Lips of Trumpetters, the Ears of Ladies, &c. The hardest part of the Corn is usually

usually in the middle, thrusting it self in like a Nail; whence it hath its Latin appellation of *Clavus*. That hard part doth often turn black, making a speck in the middle, which in some Countries gives it the name of *Bird's-eye*. The outsidés are softer, not so horny as the former, but still scirrhus, and do either prohibit access into the hole whence the Corn grew, if it have been cut out; or else suffer themselves to be crouded into the place that was voided by excision, there hardning into a new Corn of the like solidity with the former.

But it is not always that Corns are hard; they often are soft between the *Diffe-* Toes, where the Compression is not great, and sometimes have Inflammation *rences.* joined with them: which variety is ordinarily observed, and easily reduced to the common Heads.

There need no *Signs* be given of *Warts*, they being so apparent. And for *Signs of* *Corns*, whether they be Hard or Soft, the Pain will discover them: yet in the *both.* Soft *Corns* the Skin is for the most part whiter than the rest.

Warts do often fall away of themselves: whereas *Corns* are scarce ever so *Prognos-* cured that they return not again. *stick.*

The Medicaments commended in the Cure of *Warts* are many. Those *Cure of* which are most easie to be had in the Country, are, the green Rinds of Willows *Warts.* beaten, the Juice of Marigolds, Celandine, all the Spurges, a Garden-Snail sprinkled with Salt. If you rub them with any of these, they will fall off. *Ol. vitrioli* or *ol. sulphuris* will certainly destroy them. I have seen some burn them out by running a hot Needle into the roots of them. There are other ways, as by rubbing them with raw Beef, and burying it. But when any great one falls into my hands, I make a speedier riddance of it by Ligature or Caustick. Where it is capable of being tied, I make a Ligature: in others, where it is not, the Caustick-stone alone will do it.

The Cure of *Corns* is in paring them off, and applying red soft Wax: or, *Cure of* *R. picis navalis* ℥j. *Empl. diachyl. mag.* ℥ijj. *gum. galban. dissolut. in aceto* ℥℥. *Corns.* *salis ammoniaci* ℥j. *Misce:* or, *R. aluminis, vitrioli Ungarici, auripigment. ana* *part. æqual. pulveriz. & misceantur cum aceto.* All which are proper as well in the Soft as in the Hard Corns.

A Young Lady, having been long vexed with an unseemly over-grown *1. Obser-* Wart upon one of her Fore-fingers, desired my help. I rubb'd the chapp'd *vat. of* head of it with a Caustick-stone till it was soft and black; then scrap'd it off, *Warts.* and rubb'd the remaining root with some of the same till I judged it was eradicated; then wash'd out the Salts, and dress'd it *cum unguent. basilic.* with a few drops of *ol. terebinth.* which made separation of the Elcar, and cured it.

In another young Person, where they were small in the *basis*, I tied some of *2. Obser-* them close by the roots with a Silk, others I snipt off with a pair of Scissors, *vat.* not regarding the dropping of the Blood upon the neighbouring Parts, which is thought to infect them, and beget others. Then I rubb'd the roots of them all with a Caustick-stone, and digested the Sloughs out as above-said, and they cicatrized of themselves the while.

Yet you ought to be cautious how you meddle with those growing upon *Caution:* the Knuckles; for Warts there, being for the most part near the Tendons, cannot well be extirpated without offending them, and so are consequently subject to Fluxion, and corrupt the Cartilages or Bone.

This was the case of a Person of Quality aged about fifty years, of a Pletho- *3. Obser-* rick Body, who had a Wart upon the first Joint of one of her Fore-fingers. It was *vat.* imprudently undertaken by some Pretender to Chirurgery, and treated as ill; so that after many months endeavours he was dismiss'd, and a more knowing Chirurgeon entertained, who found much difficulty in the Cure, yet made a shift

shift to cicatrize it : but it swell'd again, and discharged part of its Matter by the side of that Nail. Upon sight whereof I was consulted, and saw a thin *Ichor* weeping through the old *Cicatrix* at an Opening not bigger than a small Pin-hole. The Lady importuning me to undertake the Cure, I sprinkled the Orifice with Precipitate, whereby I crusted in the Matter to thin the Skin, which the next day I opened, and by search of a Probe felt the Cartilages rotted. I informed the Patient of the necessity of making an Incision proportionably large, in order to the Exfoliation, and withal represented the difficulty ; and offered to her consideration the more certain and speedy way by cutting off that Joint. She with little demurr consented to it. All things being immediately prepared, I chopt off that Joint, dressed it up with *pulver. Galeni*, and afterwards digested it, and cured it, as hath been shewed in such-like Extirpations.

1. Obser-
vat. Of a
Soft Corn.

A Citizen came to me complaining of a pain between the two Little-Toes of one of his Feet, which he had of a long time supposed to arise from a Corn on the outside of his little Toe, and pared that often, causing his Shooes to be made wider, yet without any manner of ease ; but of late he had discovered the Pain to be on the inside of the Little-Toe. I looked on it, and, seeing the Skin whiter there than on the other Parts, concluded it a Soft Corn, and sent for one to cut it out. He pared out that white Skin, and filled up the *Fovea* with soft red Wax. From that instant he wore the straightest Shooes with much ease.

Many such-like Corns I have been consulted in making the discovery, and by my advice they have after the aforesaid manner relieved themselves.

2. Obser-
vat.

A Person of Quality complained to me of a Pain in the Joint of her Great-Toe, and Sole of that Foot : underneath the Toes she said her Pain was so much, that she could neither go in the day upon it, nor sleep in the night. I looked upon them, and, supposing they might be Soft Corns, sent for a Corn-cutter. He cut away the thick Skin to the quick, as we thought ; but she continued in much Pain, and sending for me the next morning, told me she had not been in bed that night by reason of her exceeding Pain. I suspected they had been cut too close, and were festering ; but in looking upon them I saw no heat or disturbance ; yet upon pressing my fingers on them she complained much. I, concluding there was some fault under the Skin, resolved to find it out : to which purpose I rubbed one of these places with a Caustick-stone, and scraped away the Skin as it softened, and, penetrating more deep, gave vent to an extravasated Blood. I served the rest so, and found the like Blood in every one of them : the quantity did not exceed the kernel of a Cherry-stone. I dressed them all with *unguent. basilicon* and an *Empl. diapalm.* over them, and thereby they cicatrized in twice or thrice dressing : but from the first dressing her pain ceased, and she continueth since without complaint.

In the Cure of the Hard Corns of the Feet or Toes I do not busie my self : if such Implasters as have been proposed fail, they may send for the Corn-cutter. But if through Pain a Fluxion be occasion'd, and the Part apostemate, it may then be worth the consulting a Chirurgeon ; for generally they penetrate to the *Periosteum* : and if the Apostemation doth not foul the Bone immediately, yet the lips of the Ulcer grow callous, and do not easily unite.

1. Obser-
vat. Of A-
postema-
tions from
a Corn.

An elderly Gentlewoman was much afflicted with Corns, especially one on one of her Little-Toes, which apostemated, and discharged its Matter forth at a small Pin-hole. The speedy Cure was, by eating that Skin off with a Caustick, or cutting it away, that the Matter being at once let out, it might heal. But she not admitting of either, I was put upon the necessity of paring away the Callosity, and dressing it with Lenients. Thus the Skin was kept supple, and the

the Matter discharging freely the while, it healed underneath, and the Callosity pilled of: and from that time the Toe hath continued free from Corns.

A young Lady about fifteen years of Age had an Apostematation on the outside of one of her Toes. It was occasion'd by the hard pressure of a Corn upon the Joynt of it, and had continued some Months discharging its Matter through the middle of the Corn, in spite of the endeavours that had been tried by Corn-cutters and others. Upon sight of it, the Skin which covered the Ulcer appeared (to my Judgment) callous within, and not capable of uniting with the parts underneath. Upon which consideration I stopt the Orifice with Lint, and, rubbing the Skin with a Caustick-stone, removed that false cover; then dressed it with *unguent. basilicon* warm; by which it was digested and afterwards cicatrized.

Another having an Apostematation on the outside of her little Toe by reason of its hard Pressure, I opened it by Incision, and discharged the Matter; and afterwards perceiving the Matter retained under the callous loose Skin, I snipt it off with my Scissors, whereby she was freed of her Corn, and the Ulcer was soon cured by the abovesaid Unguent.

A young Gentlewoman came to *London* with an Ulcer in one of her Toes, that next to the little one. It was on the middle Joint, occasioned by the pressure of a Corn. Doctor *Walter Needham* commended her to my hands. We dilated the Ulcer, and discovered the Bone carious. We advised her to keep her Chamber in order to the Exfoliation of it, and withal put her in mind that it was the work of nature, and required time for the perfecting of it. Upon which she demanded how long the Wound might be curing if the Toe were cut off: and being told Fourteen Days; she replied, Cut it off. We did so, and cured it accordingly by the method usual in such Extirpations.

C H A P. XXI.

Of a Cancer.

CANCER is the name of a Tumour arising (as it is thought) from an adust or atrabilious Humour. It is round, unequally hard, and (if not inflamed) of a livid or brown colour, with exquisite pricking pain: the Veins appear turgid in the Skin upon the surface of the Tumour.

The Cause of a Cancer is usually said to be adustion of Humours, which upon an over-concoction or rather broiling grow retorrid and sharp.

I cannot imagine what heat these Authors suppose to be in the Body which is capable of making such an Adustion as is here spoken of. I rather impute the corrosive venom that attends this Tumour to the materials of which it is made, than to any extraordinary heat; and that because we see the highest Fever not attended with a Cancer, and on the contrary a Cancer not often attended with any extremity of heat: so that it cannot be Adustion that is the cause of the Malady. But I rather think the matter of the Humour to be in fault, which by some error in concoction became sharp and corrosive, (it may be arsenical, as appears by the Sloughs we sometimes find made in a night.) This Humour, being of it self sharp and corrosive, is apt to convert whatever comes to it of Blood into the same acrimony with it self: which is easie to be done by mixing such an acrimonious Ferment with a Liquor that abounds with acid Salts, as the Blood of such men usually doth. Being such, it doth increase apace while the

the Skin is yet whole; but much more when, upon breach of Skin, the accession of Air adds to the vigour of the ferment, upon which it grows fierce, and thrusts it self out into *Fungus* and *Tubercles*, &c.

The remote Cause of this Tumour is, either a fault in the original Constitution of the Body; or an acquired one, as by Bruise, Tumours, ill handling, &c. Or it may be an error in Diet, viz. a great acrimony in the meats and drinks meeting with a fault in the first Concoction, which, not being afterwards corrected in the Guts, suffers this acrimonious matter to ascend into the Blood; where if it find vent in the *Menstrua* in Women, or by the *Hæmorrhoids*, or by *Hæmorrhagia*, or Urine, or the like, the mischief may be prevented: but if upon any defect in those the Humours divert to some other peculiar Part, then the Foundation of this Disease is laid, whether it be in the Breasts, or other Glandulous and spongy Parts, or indeed any other Part of the Body.

Difference.

The Differences of Cancers are many: some whereof are with Ulceration, others not. The Cancer not ulcerated is of two sorts. The one is visible and evident to the sight in the exterior Parts of the Body, and beareth the name of a *Cancerous Tumour*: the other is within the Body, and is called a *Latent* or *Occult Cancer*, and possesses the *Uterus*, *Anus*, *Palate*, &c. Others call all those Cancers *Occult* which are not ulcerated, amongst which may be reckoned those which are felt in the Glands of the Breasts, &c. Of these some are loose and moveable, and sometimes so hard that they have knocked against one another like Pebbles; if it be not more fit to call them *Schirri*: others again are hard and fixed to the Bones. Some lie superficially under the Skin; whereas others are deeper in the Flesh. Other Differences may be taken from the Humour to which they owe their Original. If the Matter be not very corrosive, their growth is slow, and they are not very painful. These are called the milder sort, of which I have had many under my care; and some of those affecting the Breast I have palliated a long time with easie Remedies. If any man will instead of *mild* or *occult* Cancers, call them *scirrhus* Cancers, I shall not gainsay him.

1. Observation.
Of Varieties of Cancers.

Such was the case of a Lady that laboured many years of an ulcerated Cancer. It had eat deep into her left Breast, and was fixed to the Ribs, but not with much pain. In progress of time the Lips inverted, and united as it were, and lay covered with a crusty Scab: the Humour in the mean while spent it self upon the Nerves, and caused a Species of a *Paralysis* in some parts of her Body, and the Gout in others. She lived long, and in her latter age tolerably healthful.

2. Observation.

Another Person of great Age hath laboured long of such another Cancer in her right Breast. It lieth large and deep about the middle of it: the whole Breast is hard and immovable. She enjoys a good health, and is like to live long for any thing of disturbance she at present suffereth by it.

3. Observation.

It is not long since that Doctor *Walter Needham* and my self were desired to look upon a Gentlewoman's Breast in the City. We found a Tumour hard and fixed, which had been some years ulcerated, and was judged a Cancer by those who had before seen it; but it was not painful. We judged it a *scirrhus* Cancer, as indeed all the forementioned, are, or at least seem to partake much of a *Scirrhus*, yet by handling or increase of Acrimony they frequently terminate in *raging* Cancers, and torment the Patient with exquisite darting Pains. Some Instances whereof I shall set down, to make the young Chirurgeon more cautious in undertaking the Cure of them.

4. Observation.

An old Gentlewoman came to me with a Swelling behind the right Ear, supposing it the *Kings-Evil*. The Tumour was of the bigness of a Pidgeon's Egg,

Egg, but lay more flat: it was hard and fixed, of a dark red colour, with a pricking pain. I assured her Friends that the Swelling was cancerous, and gave them caution in applying Suppuratives. But there wanted not one who undertook the Cure by breaking of it; upon which it became more painful. I was sent for, and saw it ulcerated deep, with stinking Sloughs, and thick Lips standing up. It was spread under her Ear, and so horribly painful that she seemed distracted therewith.

So a Girl of ten years old had a hard round Tumour in her left Cheek; by the use of Discutients it heated and became painful, that Eye inflamed, and the Temporal Muscle swelled: it reached downward, and afflicted that Jaw and Tonſil, rotting the Bones underneath, without breaking the Skin. She lost her Eye, and died soon after Lethargick. 5. Obser-
vat.

A Lady coming to Town with a Swelling in her left Breast consulted some of our Profession, and at last me. She said she had some years since Kernels in her Breast, which were judged the *King's-Evil*; upon consideration of which she was presented to his *MAJESTY*, and touched. In progress of time they swelled, and, her Breast being extremely painful, she desired my Judgment of it. The Swelling was large and round, and greatly inflamed, under which it was soft, and seemed to have Matter in it. The Parts more distant were hard, and several Tubercles lying under the Skin made it unequal: yet the Breast was not fixed. She urged me instantly to deliver my thoughts of it: which to decline, I turned from her, and told her Friends it was a Cancer, and that I saw no hopes to save her life but by cutting it off. He wished me to consider how I delivered such Judgment of it, two Chirurgeons having lately assured her the contrary, they taking it for a *Phlegmon*. But I, not being used to guide my Judgment by what others delivered, confirmed to him what I had before said by a sad prediction, which befel her within few weeks after. And indeed there was no way then to deal with it but by cutting off her Breast. 6. Obser-
vat.

In another who consulted me about a pain in her Breast, I felt one of the Glands swelled. I advised her to refrain the handling it, and to avoid the lancing her self too streight. It lay some years quiet; but then the death of her Husband happening, and one affliction following another, and the *Menstrua* stopping, the Humours fermented in this Gland, and afterwards the Breast swelled, and seemed to apostemate. Some were so wise as to assure her it was a simple Apostemation, and required Digestives: whose advice she was persuaded to follow, till she became extremely pained, and then she sent for me. It was without Inflammation, but swelled very big, and seemed to be full of Matter; yet was not without hard Tubercles and other Symptoms to shew it would terminate in a Cancer whensoever it should break. Therefore I refused to open it, but advised the best I could to give her ease, and promised to come to her, if after it brake she would send to me. Some months after she sent for me, and shewed me a great quantity of curdled Matter newly burst forth. The Breast was lank, but very hard Glands lay within, and in the circumference of the Tumour, there were some Tubercles that required to be eradicated. To which purpose I designed to have slit open the Abscess, and to have pulled away the cancerated Glands: but she would not permit me so much as to enlarge the Orifice: upon which consideration I left her. She sent for another, who chose rather to treat her the way she desired, than to leave her to other hands. She died within half a year after. 7. Obser-
vat.

Some years since a Clergy-man dwelling in the City brought his Wife to me with a painful hard Swelling in one of the Glands of her left Breast. I advised them to forbear the use of all Cataplasms or Emplasters that might heat her Breast, and to dress it with *valentia stramonii*: but she was otherwise 8. Obser-
vat.

perswaded, and thereby increased her misery. About half a year after she came to me again with a stinking sordid Ulcer, with Lips turned out, and the Breast fixed to the Ribs, with a hard unequal Swelling reaching to that Clavicle and side of the Neck, apostemated in some parts, and ulcerated in others. From the Pectoral Muscle it crept up to the Shoulder, and affected the *Axilla* underneath; and by the Compression of the Vessels the upper part of the Arm swell'd, and became scirrhus. From the Elbow downwards it was oedematous to the Fingers ends. She passed under the endeavours of many eminent Physicians and Chirurgeons of the City, but died miserably.

There is also a sort of Bleeding Cancers, which become such either from an eruption of some Vessel, which makes a vent often at the Nipple, or some other Pin-hole, the Breast remaining whole; or else from the spreading of infinite capillary Vessels in a *Fungus*, which in ulcerated Cancers is not unfrequent. These do very much spend the strength of the Patient, so that they soon die exhausted and tabid.

Cancers may also be said to differ as they affect several Parts of the Body, as the Head, Face, Eyes, Nose, the Palate, Tonsils, Throat, Tongue, Jaws, or Lips: in some of which they take their Original from small hard Tubercles, or little Excrecences, and in progress of time penetrate deep into them, or spread and invade the neighbouring Parts with a *Fungus* or loose Fleth, rotting the Bones under them.

Cancers affecting the *Uterus* and *Podex* may also be distinguished as they are in the interior or exterior parts; or as they take their beginning from a Swelling, or Excrecence: in both which cases and places they are extremely painful, and communicate their malignity both from within outward, and also from the external to the internal parts. Those that possess the body of the *Uterus*, or the upper part of the *Rectum intestinum*, are not discovered till they have made some progress; in which cases there is a bearing down, with suppression of Urine.

9. Observat.

And this was the case of a Country-Gentlewoman who came to *London* last Summer with great suppression and difficulty of Urine, (she supposed from the Stone.) Upon search I felt two hard Glands in *vagina uteri*: these pressed upon the neck of the Bladder, and suppressed the Urine. The pains from hence were so like those of the Stone in the Bladder, that Mr. *Hollier* at first would not be dissuaded from that opinion; but upon search he found it cancerous. She, poor Woman, rejoiced that it was not the Stone, and soon after returned homewards, but Died by the way.

If they be ulcerated, a filthy *Sanies* will discover it. If it be in the *Intestinum rectum*, the difficulty and pain in going to Stool will be exceeding great. If the *Uterus* be cancerated, there will be Fever, nausea, anxiety of mind. In some of them who died so diseased I have opened the Body, and found the *Uterus* preternaturally big and hard: in cutting into it, I have seen it all rotten. Those in the more exterior parts, whether it be of the Womb or *Podex*, are sooner discovered, and the Patients are in a greater possibility of being eased of their pains.

Signs.

The *Signs* of a Cancer may be taken from what I have already delivered of them. Whether they begin in a Tumour or Excrecence, their first appearance is very small: and according as the Humour is of which they are generated, so is their increase quick or slow, from the smallness of a Vetch to the bigness of a Pompion. If the matter be very corrosive, the pain is sharp, (to use their own expressions) as if they were struck with a dart. And these painful Tumours have frequently a *Phlegmon* joyned with them, or are overspread with an *Erysipelas*. And while they are thus inflamed, they will be soft underneath the

the Inflammation, so may be thought full of Matter; but if you then open them, they will only gleet. If you assuage that heat, the same place indurates again. Yet I have frequently seen a *Phlegmon* suppurate in some part of the Cancer: and after the cutting off a Cancer I have found an apostemation of well-concocted Matter in the body of it. And so it was in that Cancer my Friend Mr. *Nurse* cut off in the presence of Doctor *Walter Needham* and several of us. If pituitous Humours abound in the Body, an œdematous Tumour may be found affecting some exterior part of the cancerous Tumour: in which case the Swelling somewhat resembles a Tumour made by Congestion. These are they that grow to such a great bulk, and are pale or livid, with a mixture of a brown colour, and have those turgid Veins stretching over the Skin: whence Authors have likened them to Crabs, and these Veins to their Claws, and from thence impos'd upon them the name of *Cancer*. The many Tubercles lying under the Skin make the Tumour round and unequal: at last they break; and from that time, be the Matter much or little, they ulcerate, thrust out hard painful Lips, discharge a stinking Gleet, and fix to the Ribs, as if they were nailed to them, and in progress are of a horrible aspect.

Of all the Diseases which afflict Mankind the *Cancer* is the most grievous ^{Prognostick.} and rebellious, and is generally incurable, by reason of its corrosive and malign venom fermenting in the Humours, which so far as we can yet find, yields neither to Purging, Bleeding, Repellents, Discutients, Suppuratives, nor any other Medicine inward or outward.

Those which lie superficially under the Skin may be attempted by the Chirurgion's hand: or if they rise from an external cause, as Bruise, &c. though they lie deeper, they may be cut off, or otherwise extirpated. But those that arise from a corrosive quality in the Humours, though they may be cut off or otherwise extirpated, yet the success is most doubtful. Nor do Cancers in the Mouth or other internal Parts cicatrize well, though they be extirpated by Knife or Fire.

The Cure of a Cancer in general consisteth in these three Intentions: first, ^{Cure.} in the generation of good Blood; secondly, in correcting and evacuating of the atrabilious Humours in the Body; thirdly, in preventing the growth of the Tumour, and disposing it to Discussion.

We endeavour to perform the first Intention by an exact regulation in Diet and way of living, advising to abstain from such salt, sharp and gross Meats as may dispose the Blood to acrimony, and make choice of the contrary, such as are cooling and moistning, of easie digestion and good nourishment, as hath been proposed in the Chapter of a *Schirrhus*.

The second Intention is, in preparing and purging of the acrimonious Humours. If there be *Plethora*, or a suppression of the Hemorrhoids or *Menses* a Vein may be opened, and a Clyster given. The Humours may also be evacuated by lenient Purgatives, as decoct. *epithymi*, *sennæ Gereonis*: or this; R *flor. trium cordialium*. M. j. *sennæ* ℥iij. *epithymi* ℥ij. *insund. in sero lactis*; *colaturæ adde syr. de pomis purg.* ℥j. *mannæ* ℥vj. *Misce*. Clarified Whey and what else hath been prescribed in the Chapter of *Scirrhus* are here proper. Traumatick Decoctions of this sort are also usually prescribed: R *rad. & sol. caryophyll. chelidon. maj. pimpinellæ, senecionis, gentianæ, plantag. an.* M. j. These are to be boiled in two parts Water and one of Wine to the quantity of three pints, and sweetened with Sugar, to drink thrice aday. Or, R *rad. scrophular. maj. tapsi barb. an.* ℥ij. *filipend. ceterach. herb. Roberti, agrimon. tormentilla, scabiosæ linariæ, an.* M. j. *flor. sambuci, anthos, an.* P. j. *sem. urticar.* ℥ij. *fiat Decoct. colaturæ adde syr. de pomis alterant. & de succo citr. an. q. s.* This following Electuary is also reckoned among the Specificks: R *pulver. ranarum, limac. præparat. an.* ℥ss. *pulv. canceror.*

cancror. fluviatil. ℥j. ossis de corde cervi ℥j. cort. citr. condit. ℥j. conf. borrag. lujulae, an ℥ij. syr. de succ. citr. garyophyll. q. s. fiat Electuar. sumatur q. nuc. castanea mane & vesperi, superbibend. haust. Decoct. superscript. Emulsions, distilled Milks and Opiats are of great use to contemperate the acrimony, and alleviate the pains.

The third Intention is, to restrain the growth of the Tumour, and moderately discuss it. Whilst the Humours are evacuating, we apply Repellents and afterward we add Discutients. The Repellents ought to be of the milder sort, lest they render the Humours too gross and unfit for Resolution; as, *Lactuc. portulac. plantag. umbelic. Ven. solanum sempervivum*, Lentils boiled in Vinegar, also Clay tempered with Vinegar.

The Medicaments ready compounded are, *unguent. album, nutritum, populeon, tutiae, de plumb. usto*, Lead it self. And all the Unguents prescribed ought to be wrought in a leaden Mortar. Lead beaten into thin *laminæ* is usually worn in these cases; so is Gold after the same manner.

The Oyl of Frogs is commended in this case, and is made by baking them with butter in their mouths. Frog-spawn water is of good use in the Summer, if cloths be dipt in it and applied: but they ought to be shifted as they dry, and fresh ones applied. The often changing them in the Winter may cause the Patient to take cold, therefore you may apply then this or such like Cerote: *℞ ranar. virid. ℥ij. pulv. cancror. fluviatil. combust. ℥ss lithargyri aur. ℥ij. plumbi usti, tutiae præparat. an. ℥ij. cerussæ ℥vj. succor. solan. plantag. an. ℥vj. aceti ℥ij. olei ranar. & unguent. popul. an. ℥ij. sevi vitul. ℥iv. ceræ q. s. fiat Ceratum.* Or, *℞ sem. papaveris albi ℥j. sem. hyoscyami ℥ss. opij ℥j. gum. Arabic. ℥ss. pulverizentur, & cum ol. ros. & myrtill. an. ℥ij. ceræ q. s. fiat ceratum.* This is proper in case of pain, in the extremity whereof you may double the quantity of Opium; or in such cases you may Foment the Tumour with a Decoction of Poppyheads, flowers of Roses, and tops of Meliot, and apply the following Unguent: *℞ theriacæ vet. ℥j. succ. cancr. fluviatil. ℥ss. suc. lactucæ & ol. ros. an. ℥iss. vitell. ovor. sub cinerib. coct. num. ij. camphora ℥ss. agitentur in mortario plumbeo.*

The Discutients are Ceterach, Agrimony, *lens palustris, scabios. stramonium, succ. coriandri, ranar. limac. cancror. fluviat.* Raisins of the Sun stoned and beaten with Rue and Garden-Nightshade into a Pultice, are proper to resolve them. Many such like Medicaments are designed to this purpose; Cancers requiring variety of Applications.

If notwithstanding all your endeavours the Tumour increase, and be like to ulcerate, you may do well to forewarn the Patient of the danger: and if it be loose, and in a place where it may be safely extirpated, propose it to them, lest afterwards they desire it when it is too late.

That you may be the more successful in the Operation, I shall offer to your consideration these few Qualifications. First, that the Patient be of a strong Constitution, and of a tolerable good Habit of body, and not in a declining age, when the *Menstrua* are ceased. Secondly, that the Cancers be loose, and the *Axilla* free from painful Glands. It were also to be wished that the Cancer took its Original from some Accident, as a Bruise, &c. Thirdly, that the Operation be performed in the Spring or Autumn of the year: lest through the great heat of the Summer the Spirits be resolved; or by reason of the extrem cold in the Winter the native Heat should be choaked.

In order to the Operation you ought to have good Rowlers, Compresses, restrictive Powders and Defensatives, as in other Amputations. The use of *Chalcantum* or other Escaroticks I do not approve: for you cannot apply them so to the mouths of the Arteries but they will corrode the adjacent Parts, and

and cause pain, which ought not to be, especially in a Cancer. Besides, they require a strict Bandage, which is very troublesome on the Breasts. To avoid which Inconveniences, I propose the stopping of the Blood by a small Button-Cautery; which I acknowledge is not done without some pain, but that is momentary, and serves to correct the Indisposition of the Part: whereas the other lieth gnawing so long as it is upon the Part, and rendreth it crude and ill-disposed. There ought to be actual Cauteries of different sorts ready heated in some corner of the Chamber, lest in the Extirpation there happen to be left some reliques of a cancerous Gland behind. All things being ready, the Patient must be placed in a Chair to the light, and held steady. It is then at the Operatour's choice, whether he will make a Ligature about the *basis* of the cancerous Tumour, or pull it to him with one hand while he cuts it off with the other. For the cutting into the Breast, and pulling out the cancerated Knot, rarely succeeds well: nor indeed is every Breast so capable of being freed of the Cancer when it is cut off by making a Ligature. If the Cancer be cut off clear, your business is then to stop the Blood as you please: but if any Scirrhusity remain, you shall do well to consume it by actual Cautery. The Ancients used in these Operations to permit them to bleed freely, nay provoked them to it by crushing the Blood out; after which the actual Cautery was applied all over, then they dressed the Wound as a Burn: But according to my Method *pulv. Galeni* is most proper. Then place the Patient in bed, and give her an Anodyne Draught that night to quiet the Ferment. The second or third day after you may dress her with some Digestive, as that *ex terebinth. cum vitello ovi*; or, *R. terebinth. lotæ ʒiij. syr. de ros. siccis ʒijss. succ. plantag. solani. an. ʒij. succ. apii ʒj. coquantur ad dimid. succor. consumptionem; dein adde sar. bord. & ciceris an. ʒss. croci ʒij. vitell. unius ovi: Misc.* If there be pain, you may apply this Anodyne over it; *R. mucilag. rad. & fol. althææ, malvæ, violar. ʒss. far. tritic. ʒij. ol. ros. ʒiij. coq. ad consistentiam; Catapl. addendo in fine coctionis vitell. ovor. num. ij. croci ʒj. Misc.* But if there be no Pain, dress it with *Empl. è bolo*. After Digestion proceed with Detergents, and incarn and cicatrize as in Wounds is shewed; remembring to keep the Body soluble the while by Clysters, and purge or bleed as you see occasion. And if they had no Fontanels before, make them some now: for though the Cure may seem successful, yet if there be any evil quality in the Humours remaining, the Ulcer will scarce cicatrize.

If in cicatrizing it the Lips do grow callous, attempt the eradicating it timely by actual Cautery, whilst it is within a narrow compass, and lieth in the superficies: for if you defer it till it hath seized the musculous Flesh, it will be too late, it being then scarce capable of Palliation. Yet some Authors have left us Prescriptions whereby they give us hopes to cure them, or extirpate them. Those they have offered to us for the cure are much the same with what I have already set down: *viz. R. ol. ros. ceræ alb. an. ʒijss. succ. granat. & solani an. ʒij. cerussæ lotæ ʒij. plumbi usti loti & tutiæ præp. an. ʒss. thuris, mastich. an. ʒij. fiat Unguentum S. A.* Or, *R. unguentum tutiæ Vigonis ʒiij. the-riacæ Venetæ ʒj. sacchar. Saturni ʒj. succ. geranii, q. s. ducantur in mortario plumbeo, &c.* Others commend the Juice of Mullein boiled with Honey. *Riverius* tells you in one of his Observations, that he cured one by the often dressing it with *aq. ros. plantag. & rhæad.* with a mixture of *mel rosat.* *Aetius* proposeth *extract. sumach:* but that is more proper in Cancers of the Uterus.

Empiricks amongst us brag much of their skill in curing of them; and, by the giving of *Matthew's Pill*, or *Opium* mixed with some Purgative, they do now and then alleviate the Pain, and thereby encourage diseased People to commit themselves into their hands, whom if they can perswade to an Amputation,

tation, they get some money in hand: but their frequent miscarriages in that work have taught the more prudent people to avoid them.

Some eminent Chirurgeons, I suppose, after a fruitless endeavour to cure them, have attempted the extirpating of them by Escaroticks. *Guido* hath commended to us *Arlenick* powdered and sprinkled daily upon them, the Escar being first pulled off. *Riverius* in his Observations tells of a Cancer that was extirpated by this Application: *R. aq. fortis 3j. sublimati crudi 3viii. salis Armeniaci 3ij. arsenici 3j.* These are to be distill'd *ad siccitatem*, then the *caput mortuum* powdered, and the like weight of Vinegar to be put thereto and distilled again to the consistence of a soft Paste for use. *Ol. arsenici, aq. regia, ol. vitrioli, lap. caustic. &c.* have been proposed. When such are applied, there will be need of good Defensatives. By the authority of some of these Authors young Chirurgeons have been sometimes engaged to their prejudice: and some years since an eminent Chirurgeon, since deceased, undertook the eradicating of an ulcerated Cancer in the Breast of a Woman that had strength and courage to endure it. He applied the strongest of the forementioned Escaroticks: they penetrated deep, and made great Sloughs, which he pulled off, and by repeating the Escaroticks raised new; but the use of them was not long continued: for the Gleet partaking of the Corrosives ulcerated the adjacent Parts; and the Cancer was so enraged by the Escaroticks, as shewed there was no good to be done by them. Indeed if they had contrived Medicaments that could have penetrated deep with little pain, there might have been some hopes of success. So cancerous Excrescences and Ulcers in the Mouth are increased by the touching them with *ol. vitriol. sulphur. &c.* Upon which consideration there remain but two ways, either the actual Cautery, or palliative Medicines. If the Cancer be in such a place as you may hope to eradicate it, the actual Cautery is then a sure help: but not by applying it lightly upon the upper parts; but by thrusting at the root with a Scoop or Chisel-like Cautery, carrying it away before you. If there remain any rags of it, with a proportionable Button-cautery burn it down to a crust: but if this cannot be effected, then endeavour Palliation by such Medicaments as above have been proposed; and in case the *Menstrua* or *Hæmorrhoids* be stopt, bleed by Venæsection or by Leeches, and make Fontanels: for by such means many people live tolerably well who have Cancers ulcerated; when others who ailed less, by their impatience are dead. As you may see amongst the following Observations.

1. Observat. of a cancerous Gland in the Breast.

A Maid of about Twenty years of Age, of a healthful Complexion, came to me complaining of a pain in her Breast. I looked upon it and felt a hard Gland of an oval figure moveable. I advised her to keep her hands off of it, and to give her Breast what liberty she could, by cutting the Stiffning out of her Bodies, there being little more to be done in such Tumours. I prescribed her a Solution of *sacchar. Saturni in aq. spermat. rgnar.* to dip cloaths in, and apply to her Breast, in case of pain; advised her to Bleed Spring and Autumn, to purge with Whey, *Manna, cremor tartar.* and to contemperate the Humours with clarified Whey, wherein Borrage, Bugloss, Cichorie, Fumitorie, &c. had been boiled. Some time after upon a new complaint, I added *troch. alb. Rhas. cum opio* to the former Water. By such like Remedies she lived with more quiet of mind many years, and with much ease, and hath lately recommended others to me upon the same account.

2. Observat. Of a cancerous Gland in the Left Breast.

To another, very much pained with a Gland in her Breast of the bigness of a Chestnut, I prescribed the dressing of her Breast with cloaths dipt in the forementioned Solution, and some days after let her Blood, and prescribed an Electuary of *cassia, manna, pulp. tamarind. cum resina jalapii & sal. tartari*, to take

take the quantity of a Nutmeg at any time to keep her Body soluble. Her Pain continuing, I prescribed an Infusion to be made of *sem. cydon. psyllii, papaver. alb. hyoscyam. in aq. solani & plantag.* She was purged with decoct. *epithymi cum syr. de pomis purg.* Barly-creams, Emulsions with Cray-fish, &c. were prescribed. After all she removed into the fresh air, and drank the Waters of *Barnet* and *Tunbridge*; by which she was somewhat relieved: and by the repetition of the abovesaid Prescriptions the Gland continues quiet, and may to her Death.

A Gentlewoman came out of the Country with a cancerous Gland in her right Breast, she supposing it was the *Evil*: but being informed what it was, she desired my advice. I prescribed her such like Medicaments to palliate it. She was after some while advised to consult others. Some of them applied an *Emplastr. galbani* to it: from which time the pain increased, and the Breast swelled. She then returned to me. I anointed it with *valentia stramonii*, let her blood, and purged her with Whey, Manna, &c. by which I calmed the Ferment, and she returned into the Country well contented to palliate it, and by that Unguent it is quieted.

A Gentlewoman pained with a cancerous Tumour behind her left Ear, was by the said Ointment palliated many years; and, for ought I know, is yet alive.

A Gentlewoman aged about fifty years, of a Scorbutical and very ill Habit of Body, had also a painful Gland in her left Breast. Sir *Fra. Pr.* was her Physician, and commended the Cure of that swelled Gland to me. She was in a Scorbutical course of Physick, and had been let blood by Leeches, Fontanels were made, and several Medicaments had been applied unsuccessfully to her Breast. I applied this: *R. sevi vitulini ℥vj. unguent. rosati, popul. an. ℥ij. ol. myrtillor. ℥ij. succ. plantag. solani, geranii, an. ℥ij. suc. ruta muraria, summit. rubi, an. ℥j. lithargyr. aur. ℥ij. tutiæ præparatæ, canceror. fluviatil. an. ℥vj. plumbi usti & cerussæ an. ℥j. mucilag. sem. psyllii, papaver. alb. hyoscyami extract. in aq. spermat. ranar. ℥ij. ceræ q. s. fiat Unguent. in mortario plumb. S. A.* By the use of this her pain was eased; yet, being a melancholick Person, she was not without suspicion of ill from it, and in the Country sometimes consulted me in it. But of late years the Gland lessened and resolved. Some while after she complained of a Pain in her Back, and made bloody Water, which growing more foul, she came to *London*. Her Physician being dead, she consulted others. They all suspected an Ulcer in her Kidneys, treated her accordingly, and sent her to *Tunbridge*; from whence she returned little the better. She retired into the Country, and enjoys there a tolerable Health. I suppose this of her Kidneys is a Translation of some of those sharp Humours which affected her Breast.

A Gentlewoman of about forty years of age, subject to the Gout and Scorbute, consulted me about a small painful Gland lying superficially under the Skin of her right Breast two fingers breadth above the Nipple, not bigger than a small Hazel-nut. It was a *Cancer incipiens*, and like to be of ill quality, beginning with so much pain. I proposed the palliating of it, or the taking of it out by Incision. To the former I rather inclined: she replied, she would have it broke, and cured by Digestion. Some days after she met with one that applied a Caustick upon it, and treated it that way; and, being confident of the success, she sent for me to see her dressed. I went, and saw the Ulcer in a seeming good condition; but, in handling of it, I perceived part of the Gland remaining hard, which confirmed to me the unsuccessfulness of the undertaking. He dressed the Ulcer with *Præcipitat. alb.* upon Lint, and applied over it a piece of boiled Tripe scraped thin, (as I was afterwards informed.)

3. Observat. of a cancerous Gland in the right Breast.

4. Observat. of a cancerous Gland behind the Ear.

5. Observat. of a cancerous Gland in the left Breast.

6. Observat. of a cancerous Gland in the Breast, the extirpation attempted by Caustick.

About ten weeks after the Patient sent for me. She was much emaciated, and her Breast ulcerated, and fixt to the Ribs, with inverted Lips, and a fœtid Gleet issuing from it. I dressed her Breast with *unguent. diapompholyg.* and applied on the Parts about it *unguent. nutritum*, prescribing a Pearl-Julep to refresh her fainting spirits, and an Anodyne Draught that night to dispose her to rest. The next day Sir Fr. Pr. appointed her this distilled Milk: *℞ rad. garyophyll. chelidon. symphit. tormentill. gentianæ, an. ℥iij. sol. plantag. sedi vulg. hederæ terrest. vinc. pervinc. agrimonie, an. M. vj. sol. veronica utriusque an. M. iv. glycyrriz. Anglic. sang. porcin. an. ℥ij. lactis vaccini cong. ij. distillentur in organis rosaceis; sumat. ad q. ℥iv. tribus horis medicinalibus, addendo singulis vicibus aq. cinamomi hordeat. cochlear. ij. vel. iij. & tabell. magist. perlar. ex duplic. vel triplic. caudar. cancror. q. s. in saporis gratiam.* And in extremity of Pain, *℞ syr. è cort. citr. & de pomis alterant. an. ℥iij. theriac. solani gr. iij. sumat. horâ somni.*

I fomented her Breast with a Decoction of some of the abovesaid Plants, and with some of the Unguents prescribed in the method of Cure of Cancers ulcerated, dressed her up, by which she was restored to such a condition as to return to her house in the Country. About half a year after her Physician writ to me, and by her order offered me a sufficient Reward with convenience answerable to come to her. To which I returned for answer, That if he could propose how I might extirpate the Cancer or palliate it otherwise than I had directed her from hence, I would gladly make a Journey to her: otherwise I desired to be excused. How long she lived afterward, I have not heard.

7. Obser-
var.

A Person of Honour aged about thirty eight years, was taken with a pain in her right Breast, she thought from some Bruise. A while after she felt a hardness two fingers breadth above the Nipple, which growing more painful, she put her self in the hands of some who pretended to cure it: but the Blood burst out at the Nipple the while, which eased her of the pain. During this the Nipple contracted inward, and by the large and frequent bleeding the Humour became sharp, affecting her Kidneys, and at other times her Hands and Arms, with a *Rheumatismus*: mean while her Breast was easier. Thus she suffered some years under the Fermentation of sharp Humours in one part or other, but for the most part in her Breast, which in progress of time raised it into a great unequal Tumour of a brown and livid colour, with turgid Veins overspreading it. Doctor *Whistler* had been often consulted by her, and relieved her as often by Purgings, Venæsection, Leeches, Traumatick Decoctions, &c.

The Cancer growing great, and the Tubercles ready to disburthen themselves of the corrupt *Serum* which distended them, I was consulted, and, observing the danger the Patient was in, desired a Consultation, and that Dr. *Whistler*, who had discontinued his Visits, might be present, with Sir *Al. Fraſ.* Dr. *Walter Needham*, and Mr. *Hollier* Chirurgeon, to join in the Consultation. Accordingly we met and considered the Cancer. It was of a very ill aspect, ready to burst and not fixed. But I, apprehending that after its eruption it would fix, and rage, as is usual at such times, offered to their consideration the taking off the Breast while it was capable of it, lest afterwards it should be objected as a fault. It arising from an outward cause, gave me the more encouragement: but the Patient not admitting of it, we consulted how to treat it. Cordials, Emulsions and Anodyne Draughts were prescribed; external Medicaments were also considered to calm the heat of the Cancer. Some few days after a stinking Gleet burst its way out in great quantity by a small Opening, to the great ease of the Patient: upon which the Tubercles and Breast sunk, and, after the casting forth of some corrupt Sloughs, the Matter became well scented,

the

the Breast also contracting into an uniform shape, grew less than the other, and the Patient recovered strength to rise out of her Bed. Doctor *Whistler* attended the Cure, and by good Balsamicks, Traumatick Decoctions, &c. disposed the Humours to better temper, insomuch as the Lady appeared abroad, to the wonder of those that had seen her some weeks before. She being so recovered, it became a question whether it had been ever cancerated. But since that there have happened new Eruptions, and there yet remaineth such hardness and inequality in it as will demonstrate what it was.

The Year before the Sicknes a young Woman came to me complaining of a grievous pain in her right Breast. She was of a healthy Complexion, and her Breast seemed to look as well: but in handling of it I did feel a couple of hard Glands. She had consulted others, and came to me to cut them out. I dissuaded her at that time from such thoughts, by telling her the inward Cause was first to be removed, and the Humours better disposed. To which purpose she was let blood, purged with Infusions of *Sena*, &c. and advised to drink the Waters of *Epsom* and *Tunbridge*. I also directed her some of the Medicaments set down in the method of Cure, to alleviate her pain. Some weeks after she came again, and told me she was informed that she should not be eased of her pain till those Knots were taken out. I told her those Glands lay deep, and the musculous Flesh and Parts about were infected with the same Juices, and consequently the Operation could not be successful unless the Breast were cut off. Upon which she departed from me unsatisfied, and some days after put her self into the hands of another, who cut out those Glands, and endeavoured to cure. But it grew cancerous; and then he cut off the whole Breast. Some months after when it was near cured, she came and shewed it me with much joy. I felt it hard round about, and suspected it would not cure; as indeed it did not: for some months after she came again to me with it ulcerated deep and wide into the pectoral Muscle and Parts about, and fixed to the Ribs. She grievously bemoaned her misfortune, in permitting it to be cut off. By this and such like work I have been taught not to cut off Breasts that cancerate from an internal Cause. I did what I could to ease her pain by palliating the Ulcer, but it was too late.

In the time of my waiting at the publick Healings, there came to me a Country-maid, aged about twenty six years, of a sickly Complexion, diseased with a Cancer in her right Breast arising from some accidental Bruise. It first swelled, then grew hard, and in progress of time ulcerated, and had frequently bled to the quantity of a quart at a time, and sometimes to two quarts as her Friends told me. I considered the Breast as incurable, and judged the bleeding to arise from a *Fungus* which lay too deep to be reached by any Medicament: therefore thought it reasonable to propose to them the extirpation of the Breast before it should be fixed to the Ribs. They had tried many things unsuccessfully in the Country: and, being now informed that it was not the *King's-Evil*, they were not unwilling that it should be cut off, but took time to consider of it, and about a month after came to me again resolved for the work.

The taking off of this Breast happened to be seasonable for the experimenting of the Royal Stiptick Liquor, which was given me the morning before by his *MAJESTY's* Command: upon which Consideration I provided no other Astringent than a couple of Buttons made of Lint which lay wet in a spoonful of that Water. But, in order to the bringing the Lips of the Wound together, I had prepared a couple of Needles with a strong twisted Thread cered, also a Digestive *ex terebinth. cum vitello ovi*, &c. spread upon Pledgits, with Compress and Bandage. Being thus provided, I attended some Friends who desired to see the efficacy of the Water. But Doctor *Walter Needham* being

come, and it growing late in the Evening, we proceeded in the work. He pulled up the Breast while I made a Ligature upon the *basis* of it, and cut it off. The two Arteries bled forcibly out, till Doctor Needham applied a wet Button on the one, and my Kinsman *Jaques Wiseman* applied the other. That of the Doctor's stopt the Bleeding at that very instant, and the Compress adhered to it; but the Blood dribbled from under the other: which we supposed happened by reason of the Blood streaming upon it in the putting it on. But by the application of a fresh Button the Bleeding there also stopped. During this the Lips of the wound were brought nearer to each other by a cross stitch. We then applied our Digestive with convenient Bandage over it, and laid the Patient in her Bed. In our absence she fainted, and upon the drinking a draught of cold water vomited, and her Breast bled through the Dressings. Upon sight thereof I took off the Dressings, and seeing one of the Arteries seepe, I applied a fresh Dossil, and stopt it: but it being Night, and dreading mischief might happen if it should bleed again, I sent for a small Button-Cautery, and that way secured it. The third day we took off the Dressings, and found it well digested; and from that time it cured daily. But she complained of a soreness of that side of her Throat, which she had done ever since her Breast was cut off, and within a week after of a shortness of breath; upon which she was let blood; and by my Friend's Prescriptions she was also purged with *infus. senna, rhabarb. &c.* and afterwards with *pil. fetida, &c.* Her Breast being near cicatrized, she was supplied with Dressings, and returned to the Country the sixth week after the cutting it off. But she continued there indisposed, and the *Cicatrix*, by reason of the sharpness of Humours, fretted off, and enlarged the Ulcer very much: whereupon she returned to me again. I dressed the Ulcer with *unguent. tutia, &c.* and let her blood: then purged her as abovesaid, made her a Fontanel in her left Arm, and in few weeks cicatrized her Breast. Since which time I have seen her often in Town in very good health, and her Breast firmly cicatrized, without pain or hardness.

10. Obser-
vat.

A Person of about fifty years of age, having some scirrhus Glands in her left Breast, was impatient to have them discussed or suppurated: to which purpose she consulted several of our Profession, and afterwards my self. She was under the hands of some Empiricks, that were endeavouring by Pultices to break it: there was also a Fontanel made in the lower part of her Breast under the Tumour, she hoping that way to spend it. I advised her to forbear the use of such Applications as might heat her Breast, telling her the ill consequence in breaking those Swellings. She did not approve of what I said, but pursued her design. Some time after a false Suppuration was made in her Breast and an effusion of blood followed; and by the continued use of Pultices the Ulcer enlarged, and by frequent Bleeding her Body emaciated. She being very near wasted by a new Eruption sent for me. I stopped the Bleeding by the application of *pulv. sang. dracon.* with Pledgits of *unguent. desiccativum rubrum*, with a soft cap of Tow pressed out of *Oxycrate*. The next day I took off the Dressing, and found it had not bled. I also observed the Tumour to be a meer *Fungus*, and the Ulcer an Excoriation of the Skin which encompassed it round, and the frequent Bleeding occasioned by Escaroticks and hot Cataplasms. I dressed the Breast with Epuloticks, as *unguent. tutia Vigonis*, and such like, and with cloths dipt in *aq. spermat. ranar.* with *sacchar. Saturni*; and in some parts I applied Pledgits dipt in the same, with a Solution of *troch. alb. Rhaf. cum opio*, by which the heat was contempered, and the Excoriation cicatrized. Sir *Fra. Pruj.* was in the while consulted, and prescribed her this; *R. antimoni diaphoretici gr. 15. magist. perlar. gr. 6. sol. auri num. 1. Misc. pro una dosi, & sic pro aliis; detur horis matutin. & quartis pomeridianis, superbibendo sequent. Julep.*

Julep. ℞ *aq. stillat. borraginis, buglossi, cardui benedict. scor-*
dii, dracon. an. ℥ss. *syr. è succ. citr. & de pom. alterant.* an. ℥iv. *ocul. icancror.* ℥ss.
aq. cardiacæ ℥iv. *Misc. in usum præscript.* And to dispose her to rest, ℞ *syr.*
è succo citr. garyophyll. an. ℥iij. *theriac. solani,* gr. iij. *sumat horâ somni.* Distil-
 led Milk, Emulsions, &c. were prescribed; her Body was kept open by Cly-
 sters; and, after she recovered her strength, she was purged with Whey, Man-
 na, &c. Thus in a few weeks she was cured: but the Tumour remained, and
 retained the colour of the Blood lying underneath it. In the time of the Bleed-
 ing, by the application of Escaroticks and hard Bandage a Gland was raised
 under the right *Axilla*: but by forbearing the use of Bandage, and my dressing
 her Breast with Lenients, the pain therein ceased, and she enjoyed a good mea-
 sure of health, and was my good Friend, till about a year after it was told her
 that one Mrs. R. who laboured of a Cancer in her Breast, had caused a Moun-
 tebahr to cut it off, and that she was thereby cured. Upon this she sent for me,
 and would have her Breast cut off. I declined it, and shewed her, as I thought,
 such reasons as might have dissuaded her from such an Enterprize: but she
 was resolved, and, after I was gone, sent for the Empirick, who undertook
 to extirpate it by Escaroticks: and she bled to death in few days. I was sent
 for; but being out of Town, she was dead before I came to her. If she had
 not been in such haste, she might have out-lived that Gentlewoman: for her
 Breast cancerated, and she died within a few Months after.

A Person of about forty years of age, of a very ill Habit of body, from her
 very youth had a hard Gland on her right Side near her Breast: it had some ^{11. Obser-}
 pricking pain in it, but was movable: it seemed to me a *Cancer incipiens*. I was
 willing to apply somewhat to it, but, suspecting that the increase of the Gland
 might be imputed to it, advised her to keep her hands off it, and to lace her Bo-
 dies more slack; telling her, that upon her return to London the Autumn fol-
 lowing, if she were not better, she might consult those of our Profession. She
 did so, and accordingly as she had proposed came to Town again, and sent for
 me. The Gland was then grown bigger and more painful, but was movable;
 there was also a small painful Gland under that *Axilla*, which much discoura-
 ged my undertaking. I acquainted her Physician of the danger she was in, and
 wished him to propose to her the consulting some others. The next day Doctor
Wharton met the Lady's Physician, Doctor *Windebank*, and my self. At the
 Consultation I declared my thoughts of that Gland, *viz.* that it was a Cancer;
 and by the Progress it had made in three months, it was like to be a difficult
 work, and wished the Patient might be acquainted with the danger; for by
 her discourse to me she expected I should speedily cure her, and that by supp-
 urating the Gland: which way was destructive. For, according to *Galen*, and
 our daily experience, *ab emollientibus exasperantur*: and to proceed by Repel-
 lents and Discutients were only to palliate; which I doubted we should not
 be long able to do. The only hope then remaining was, cutting into the Skin,
 and taking the Gland out while it was movable. This was not approved of.
 We then considered what to dress it with. Doctor *Wharton* would needs leave
 that to my care: but I, having no Inclination to be engaged in it, desired it
 might be prescribed by us, and made by the Apothecary; which was as fol-
 loweth. ℞ *aq. spermatis ranar.* ℥j. *sem. psyllii, papaver. albi, cydon.* an. ℥ij. *extrahatur*
mucilag. cui add. *troch. alb. Rhas. cum opio* ℥j. *sacchar. Saturni* ℥j. *Misc. fiat*
mixtura parti affectæ tepide linteis in illa madefactis applicanda: then a distil-
 led Milk; ℞ *fol. agrimonie, veronice utriusque, garyophyll. plantag. borrag.*
sumariæ, heder, terrest. an. M. iij. *limac. cum testis* ℥ij. *passul. maj.* ℥j. *astacor.*
fluviat. num. 24. *glycyrrhiz. rec.* ℥ss. *sem. fœnic. dulc. coriand.* an. ℥iv. *fiat omnium*
distillatio in congiis ij. lactis vaccini recentis; dulcoretur cum sacchar. perlar.
 q. s.

q. s. capiat ℥ss. 3 horis medicinalibus; in haustu ultimo, horâ somni, capiat alternis noctibus ℥j. syrup. de papaver. erratic. & asellor. recent. num. xx. pistentur & macerentur in haustu aq. lactis præscript. capiat horis matutinis tres dies continuos. Many things were prescribed, both internal and external: but she was no way relieved. When the Glands were not painful, she was sick of some *Diarrhœa*, Catarrh, &c. and if she was well in health, then the Glands were painful: and while this bigger was treated, it would feel soft in some part, and be protuberant, and after a while harden again. Thus every new Fluxion increased this Gland, and gradually made it unequal; yet it continued movable: which gave me one time an occasion to tell her, that the cutting the Skin, and taking that Gland out whole, was the best way to free her of it: She perceiving that I had no Inclination to suppurate it, as she hoped I would, was contented that I should draw off, to make way for some other. About two months after I met with one that attended the Cure; who told me they had suppurated it, and were in hopes to cure. I replied, You will only have a Gleet; as indeed it proved: and afterwards it thrust out a large *Fungus*. She was then desirous to have it cut off, but it was too late.

12. Observat. of a cancerous Wen gangrened and cured.

A Woman of about thirty six years of age was supposed to have a Cancer in her left Breast, and had been palliated many years by Sir *Fra. Pt.* One day, she being at her house in the Country, it did break, with very exceeding pain. She writ to her Physician, who sent me to take off the Breast. When I came I saw it gangrened, and was somewhat surprized at the novelty. The Tumour was round, of a very great bulk, and movable; it was gangrened by reason of the overstretching of the Skin. The Mortification had eaten through the Skin the compass of the palm of a hand. I cut it into the body of the Tumour, and found it a cancerous Flesh, and lying within a *Cystis*. I, supposing it a cancerous Wen, (how properly I know not, it being the only one I ever saw,) fomented it with Wine, dressed it up hot with *unguent. basilicon.* and gave her an ounce of *syr. de meconio* in a draught of Mace-ale, to quiet her pain. The next morning I found her much afflicted, and saw many cloths wet with the Gleet, the Mortification was much spread in the Skin, and the cancerous body cracked as a Pomegranate over-ripe. I considered the Gangrene, and supposed it would save me the labour of cutting off the Breast, and that it would cease upon the pulling away of the cancerous body. Upon which consideration I pulled out that part which was outermost, I believe the fourth part of it; and would then have pulled it all out by dividing the Skin, but she would not permit it. I continued my way of dressing as before, stay'd at the house with her three days and dressed it twice a day, pulling out some part of the Wen each time. The Gangrene in the Skin stopped, and she became very easie. But perceiving she would not permit me to thrust out the remaining Wen, I desired a neighbouring Chirurgeon might be sent for: who being come, we dressed the Patient. I shewed him that by Digestion the remaining fleshy body with the *Cystis* would come away, and by that time the Lips with the Skin would be ready to unite with the whole: which accordingly came to pass, and she was perfectly cured in less than six weeks, and is yet well.

13. Observat. of a cancerous Tumour on the Head.

A Man of about fifty years of age came to me out of the Country with a hard unequal Tumour, of the bigness of a large Wall-nut, between the Coronal and Sagittal Suture: it had been ulcerated, but was at that time crusted over with a Scab, and seemed to be a milder sort of Cancer. He supposed it the *King's-Evil*, but being assured by me otherwise, he desired my help. I considering its *basis* resting upon the *Cranium*, made no difficulty in the undertaking it. Therefore providing Dressings ready, I made an Incision round it to the Scull; then raised it off with a *Spatula*, and permitting the blood to flow

flow, while I dressed it up with Astringents. The third Day after I took off the Dressings, and saw the Lips of the Wound well disposed, and the *Cranium* uncorrupted. I rasped it till the Blood appeared under it, then dressed up the Wound with Digestives *ex. terebinthina*, &c. and after Digestion incarnated and cicatrized it with as little difficulty, and dismissed him cured.

A Man about twenty eight years of Age came out of the Country recommended to me with a Cancer on his Left Cheek, stretching it self from that side of his Nose close under the lower Eye-lid to the external *Canthus*, so making a compass downwards. It was broad in its *basis*, and rose copped like a Sugar-loaf. It gleeted, and was accompanied with Inflammation and much pain. He had also some scirrhus Glands under that Jaw. The extirpation of this Cancer had been attempted in the Country, but it growing afterwards bigger, and threatening his Eye lately with Inflammation, he hastned up, and importuned me to undertake it. I complied with his desire, and four or five days after, having prepared all things ready, *viz.* actual Cauteries, Digestives, Defensatives, Bandage, &c. Doctor *Walter Needham* and my Kinsman *Jaques Wiseman* being assisting, I pulled the Tumour towards me with the one hand, during which I made my Incision close by the Eye-lid, and cut it smooth off, as close to the *Os jugale* as I could do it, avoiding the *Periosteum*. The Blood at first spurted out forcibly from many Capillaries besides two considerable Arteries: we permitted them to Bleed a while. The lesser Vessels stopp'd of themselves, and we cauterized the greater afterwards. Then viewing our Work, and observing some relique of the Cancer remaining above the external *Canthus*, we consumed it by actual Cautery, and dressed up the Wound with our Digestive, with Embrocations, Defensatives, and moderate Bandage to retain them. The third day we took off the Dressings, saw it well disposed to digest and dressed it as before. The second Day after, dressing it again, the Cancer appeared rising from the side of the Nose and Eye-lid; it also overspread the Cheek bone. I dressed it as I had done the time before, and the next time came prepared with actual Cauteries, and consumed it all, then dressed it up with Lenients. From that time the Ulcer healed daily, and contracted in ten Days space to the half: yet since that it begins to bud again here and there, which will put me upon a necessity of using the actual Cautery: and what account to give of it, I yet know not.

A Gentlewoman Aged about Forty Years, of a strong healthy Constitution, came out of the Country diseased with a large fleshy Excrecence, painful, and of a livid colour, thrusting it out from the Gums of the lower right Jaw. It had rotted the Teeth nearest to it, and weakened the rest, by the Ulceration and Relaxation it had made in the Gums. It had been viewed by some of our Profession, who declined the meddling with it as Cancerous; for which reason I undertook it: for supposing it a Cancer, it ought the rather to be extirpated whilst it affected some particular Part that was capable of it. The ill consequence of such omissions may be judged by the following Observation. I readily undertook the freeing her of the Excrecence by actual Cautery: which she consenting to, I caused a Scoop-like Cautery to be made proportionably big, to thrust off the Excrecence at once with its root: then sent for *La Roche*, we punched out the stumps of the Teeth that were in my way. Then, one of my Servants holding her Head steady whilst another held her lower Lip down and her Tongue on one side, I pressed with the Cautery well heated into the lower part of the Gum, and extirpated it quite; then with a Bolt-cautery consumed and dried the lax and rotten *basis*: which being done, she held in her Mouth a *decoct. bordei cum sem. cydonior.* and used it daily till the Escar separated. I then made her a *decoct. plantag. equiset. summitat. rubi, flor. ros. rub. balaust.*

14. Observat. Of a Cancer on the Left Cheek.

15. Observat. Of a Cancerous Excrecence of the lower Right Jaw.

balauft. cum syr. de ros. fuccis, with which and the Vitriol-stone I cicatrized the Ulcer firmly. I neither purged her, nor let her Blood; supposing the latter would be more seasonable after in case of Inflammation: but there happening none, that was omitted. And so was the Purging, I supposing it might put the Humours rather upon a Ferment. She was cured in less than three Weeks, and continueth well.

16. Obser-
vat.

A Person of about Fifty years of Age, of a strong Constitution, by cracking of an Apricock-stone caused a pain amongst the great Teeth of his upper Jaw on the left side. From that time that part of the Gum swelled, and one Tooth grew loose, and after some time a *Fungus* thrust the Tooth out. A *French-man*, Chirurgeon to his Regiment, endeavoured to consume the *Fungus* with *oleum vitrioli* and such like: but it increasing spread farther, and affected the whole Jaw, insomuch as all his Teeth dropt out to the *Septum*. The *Fungus* greatly increasing thrust out two distinct Lips, the one whereof stretched out the Cheek, and the other overspread that side of the Roof of his Mouth. The Patient being in this condition came up to *London*, and called to a Consultation Sir *Fra. Pr.* and Doctor *Bate* Physicians: of Chirurgeons there were Mr. *Arris*, Mr. *Edward Molin* (deceased,) Mr. *Shunbub*, a *German*, Chirurgeon to his Grace the Duke of *Albemarle*, Mr. *Troutbeck*, and my self. We, being met, saw the Patient dressed: his Chirurgeon pulling out a Tent very big and long from between the two *Fungi* in that place where the Disease began. After we had severally considered the Malady, we withdrew to consult, and, unanimously concluding it an ulcerated Cancer, proposed various Remedies in order to Palliation; as shaving the Hair of his Head, applying Cephalicks, a Seton in the Neck, Fontanels, Blistering, Bleeding, Purging, &c. Coming to the Patient with the Prescriptions, he asked what way we had designed to cure him. After some pause (for we having no hopes of curing him, had not discoursed of that,) Sir *Fra. Pr.* answered, the Attempt of Cure in such Ulcers had been always unsuccessful and extream painful, *viz.* by Burning, and thereby the Disease hath been for the most part exasperated, and the Life of the Patient shortened. The same was affirmed by us all. The Patient replied, God's will be done. I pray go and consider of the way: for I had rather die than live thus. We withdrew, and resolved to comply with his desire, returning suddenly again to him with that Answer, and commended to him Mr. *Edward Molin*, that excellent Operatour. But he refused it, as being preingaged to go out of Town. It was then put upon me: and at their desire I undertook it, and gave directions for the making actual Cauteries of various sorts, some Bolt like, others like Chisels, others of other Fashions. There were Instruments also made to defend his Tongue and Lips. While these were making, the Patient was let Blood, purged, and prepared for the work. That done, we met again, and had the Instrument-maker attending to heat the Cauteries, and mend or alter them as occasion should offer. One of the Assistants held his Head and upper Lip, whilst I with a *Speculum oris* held down the Tongue with the one hand, and with the other passed a plain Chisel cautery just under the upper Lip into the body of that part of the Cancer which stretched it self along the Roof of the Mouth to the Palate, and repeated the use of that-fashioned Cautery till I had made a separation of so much. The carrying the Cautery thus in the middle of that Cancerous Lip was the way to preserve the sound parts from being scorched with the reflection of the glowing Iron. It was also a great encouragement to the Patient to see such gobbets burnt off with so little pain. After I had scooped off what I could of that Lip, then with Olive and Bolt-like Cauteries by burning I dried up the remainder to a crust. That done, I went to work with the other Cancerous Lip which lay stretched along that

part

part of the Jaw to the Cheek, and raised it up as a Trumpeter's in the time of Sounding. I passed a Chisel cautery into the body of that, and made a riddance of a great part of it, cutting and burning through the *Alveoli*, which were as rotten as dirt, till the Patient grew weary, and the Physicians thought it was enough for that time. We then gave him of this Lotion to hold in his Mouth to cool it: *℞ sem. cydonior. ʒj. sem. psyllii & papaver. albi an. ʒij. extrahantur mucres in aq. plantag. solan. & ranar. an. part. æq. That Night he was laid to Rest with this; ℞ aq. paralyseos ʒij. aq. theriacalis ʒij. syr. de meconio ʒvj. Misc.*

The next day in the Afternoon the Two Physicians and some of the Chirurgeons met me at the Patient's Chamber. He had slept well, and was for the work, he said, placing himself very chearfully in the Light. Renewing my work, and feeling with my Finger the length of that Lip stretching by the Roof of the Mouth, I felt a moisture in a chink, which I searched with a Probe, and found a hollownes over the Roof, from whence there issued Matter. On the other side, which I burnt last, the Flesh was high. I began with that over the Roof, and burnt all that part dry, and left it lying hollow like an Arch: then burnt the other side with Olive and Bolt-cauteries down towards the *basis* of the *Alveoli*, and found the remaining Sockets full of the same loose Flesh. I burnt into each of them, and at the same time dried them what I could; and where ever I saw any Excrecence, I consumed it, and thereby smoothed my work. It was not easie to distinguish the sound from the unsound, by reason of the swelling in the neighbouring parts. It was also much more painful to the Patient, as the sense of the Nerves and Membranes were more exquisite than that of the hard Lips which I consumed the day before. Yet he sat chearfully, till I declared that I had not left a cranny uncauterized: then he rose, and washed his Mouth with some of the forementioned Mucilage, to which there were some beaten whites of new-laid Eggs added. His constant Drink was this: *℞ rad. sarsaparillæ ʒvj. infund. in aq. font. ℥ ix. per horas xij. tum add. rad. scorzonæ ʒij. summat. majoranæ, melissæ, an. M. j. flor. cordial. an. M ss. pom. redolent. num. vj. coq. ad tertia partis consumption. ℞ decocti præscript, ℥ j ss. canor. fluviat. coct num. xvj. amygdal. dulc. num. vj. nuc. pin. ʒij. manus Christi perlata ʒj. fiat Emulsio. Of which latter he took thrice a day. About 12 of the clock that night he sent for me, and told me I had changed his pain: It was before, said he, a gnawing pricking pain, but now it is burning hot; yet, said he, I did not send for you so much to ease my pain, as to rejoyce with me in my recovery. I embrocated the Cheek *cum oleo & aceto rosac.* and afterwards applied soft cloaths dipt in the same, advising him to hold some of his formerly-prescribed Lotion in his Mouth, and gave him a draught of his Anodyne, which laid him to sleep. In the Morning, when he wakened, he called his pain a comfortable heat. His Physicians prescribed him a Clyster, and this cordial Electuary and Julep: *℞ pulpæ conf. lujulæ, garyophyll. an. ʒ j ss. confect. de hyacintho ʒ j ss. marg. præparat. ʒj. magist. è coralliis ʒij. syr. garyophyll. q. s. fiat Opiatum; capiat q. nuc. moschat. 3 horis medicinalibus, superbibend. Julep. sequens; ℞ aqu. cerasor. nigror. flor. tiliæ, an. ʒvj. aq. theriacalis ʒij. syr. garyophyll. ʒjss. Misc.* I visited him daily, and where I saw loose Flesh arise, I burnt it down with one Cautery or other moderately heated. A learned Person visiting him often, and for the most part finding me there drying and smoothing my work with the Actual Cautery, suspected the event, and went out from us mumbling that Aphorism of *Hippocrates*, *Quibus sunt Cancri in Palato, sede, Utero, &c. si urantur ulcera, cicatrice induci non possunt.* It much disturbed me, but I prosecuted my Cure more industriously; and by drying the loose Flesh where-ever it appeared, as also the Bones, I disposed them to cast off, and the*

Flesh to a hard *Callus*, which cicatrized with the adjacent Parts. In the time of the cicatrizing I prescribed him this Water to wash his Mouth before and after meat: R *aq. plantag. equiseti, fragor. an. lb j. flor. ros. rub. balaust. an. M. j ss. coq. ad 3. partis consumptionem; colaturæ add. syr. diamoron, de ros. siccis, an. ʒ j ss. acet. rosac. 3vj. Misc.* By this method he was cured in the space of six Weeks with a firm and smooth *Cicatrix*. Doctor Bate whispered Sir *Fra. Pr.* that it would not hold a Month: but it held Seven Years, or thereabouts. Others of our Profession, who at our first Consultation had declared it an incurable Cancer, did afterwards, when they saw it cured, declare amongst their Companions that it was no Cancer. Such an irresistible Disease is a Cancer.

In the Year Sixty Eight the same Person, being at his House in the Country, was taken with a Fever, which after some days terminated by a *Crisis* in the outside of the same Cheek from which the cancerated Jaw had been extirpated. They dressed it with Pultices of Chickweed, and the like, by which it suppurated, and discharged its thin Matter by small Eruptions; the grosser remaining rendred the Ulcer tordid and callous. Upon which they sent for a Chirurgeon, and afterwards for a Physician of that Country. They dressed it about half a year. It not yielding to their Application, they consulted me by a Letter: to which I returned Answer, that I suspected it cancerous. Upon the receipt of it, he came to *London*, believing at the worst I could burn it out. He here consulted divers eminent Physicians and Chirurgeons. It was now a Cancer, and indeed not capable of extirpation, having seized that side of his Throat. I attempted some part of it within by the actual Cautery: but it not succeeding, and I being soon after fetched into the Country others were employ'd: but after all he languished and died.

17. Obser-
vat. of a
Cancer
under the
Tongue.

A Captain of a Company in one of His *MAJESTY*'s Regiments of Foot, Quartering in the North of *England* was troubled with a small Excrecence under his Tongue. He consulted the Physicians and Chirurgeons in his Neighbourhood: but it increasing with pain, he was perswaded by his Friends to come to *London* to me. But after he came to Town, he met with some who told him that such a small thing was not worth the troubling me. Upon which he went to some other, and, having got somewhat to dress it, he returned to his Command in some of the neighbouring Counties, and there fell into the Chirurgeons hands, where it encreasing and spreading much infected the internal salivary Glandules on both sides the Tongue, all the lower left *Maxilla*, and part of the right. 'Twas fixing upon the lower Lip, the Teeth all loose, and some of them fallen out: there were also some Glands without under the Jaws. In this condition he came to me. I acquainted his Friends that it was a Cancer, and incurable. If an attempt was to be made in hopes of Cure, it was to be by burning it out. They consulted their Friends: and afterwards Doctor *Tho. Cox*, Doctor *Walter Needham*, and my Self met. It was concluded by them, that there was no other way or hopes to cure him: how that might succeed we doubted. If he would have it attempted, it should be at his desire, and not upon any assurance from us to cure him thereby: for indeed it was doubtful. The next day he sent for us to meet at his Chamber in order to the extirpation. Accordingly we met, and having Mr. *Gosling* with us, and our actual Cauteries and all things ready, we placed the Patient in a clear light, then pulled out the Teeth that lay loose, and as it were buried, in the *Fungus*. Then having his Head held firm, and his lower Lip defended, I passed in a plain Chisel-cautery under the *Fungus*, as low as I could, to avoid scorching of the Lip, and thrust it forward towards the Tongue, by which I brought off that *Fungus* and the rotten *Alveoli* at twice or thrice repeating the Cautery; then with Bolt-cauteries dried the *basis* to a crust. After
with

with a Scoop-cautery I made a thrust at the *Fungus* over-spreading the left Jaw, and made separation of that, and what was rotten of the *Alveoli*: then with Olive and Bolt-Cauteries I dried that as well as he would permit, and left the rest for the next day's work, giving him some decoct. *bordei cum sem. cydon. psyllii, & alb. ovor.* beaten in it, to cool the heat in his Mouth, and applied on the outside under his Chaps this Defensative: *R. boli armen. pulv. ʒj. pulv. flor. rosar. rubr. balauft. sumach, an. ʒ ss. gallar. pulv. ʒiij. coq. in acet. acer. ʒ ss. ol. ros. & myrtill. an. ʒij. empl. de minio q. s.* The Physicians prescribed this: *R. laudani gr. iij. solv. in aqu. epidemic. cinnamom. hordeat. an. ʒi ss. syr. kermes ʒiij. capiat tertiam partem statim, repetatque altern. horis donec placide dormierit.* This following Cordial was also prepared: *R. aq. epidemic. ʒviij. syr. caryophyll. è succo citr. cardiac. an. ʒ ss. sumat cochlear. iv. ad libitum in languoribus.*

The next day we met again, and found our Patient much relieved with the good night's rest he had got: he was chearfull, and resolved for the work. I began with Bolt and Olive-cauteries to make an end of drying that *Fungus* on the left Jaw; which having done, I burnt the salivary Glands on both sides of the Tongue: then I placed a Tin-instrument between the Tongue and the Excrecence which was rooted on the *Ranula*, of the shape of a *Crista*, thick and hard, bearing the Tip of the Tongue backward. The Tongue thus defended, I thrust at the root of it with a Bolt-cautery, by which I eradicated and burnt it off. Having thus cleared the Mouth of the *Fungi*, I desired the Physicians Judgment of it: they looked, and liked what was done: the Patient washed and cooled his Mouth with the same Lotion as before, and had liberty to repeat the use of the Opiate and Cordial.

The next day we met again, and found our Patient well satisfied with what had been done, it being only stiff and hot, otherwise not painful, and he could take his sustenance with more Ease and Gusto. The Physicians prescribed him this Clyster to make his Body soluble: *R. decoct. com. ʒx. elect. lenitiv. ʒvj. mell. violac. & sacchar. rub. an. ʒi ss. ol. amygdal. dulc. ʒj. Misc. fiat Clyster.* The second day they purged with the following Apozem; *R. fol. senæ ʒj. turbit. & hermodact. an. ʒij. ligni sassafras, sem. coriand. an. ʒj. nuc. moschat. ʒ ss. salis tartari ʒij. infund. & bull. in aq. beton. f. q. fiat colatura ad ʒxii. cui adde syr. de pom. magist. ʒi ss. syr. ros. solut. mannæ, an. ʒj. clarificentur ovi albumine, & fiat Apozema pro tribus dosibus matutinis, sumend. horis duabus ante jusculum cum custodia.* There was also prescribed this following Traumatick Decoction: *R. sarsaparill. ʒij. chinæ ʒj. ras. eboris, corn. cerv. an. ʒj. infund. & bulliant in aq. font. ʒvj. addendo debito tempore summitat. elatin. hyperici, millefolii, herb. Robert. an. M. j. sem. coriandri ʒij, cinnamomi ʒi ss. passul. enucleat. ʒij. colat. ad ʒiiv. bibat ʒi ss. in die quotidie.* By the extirpation of the *Fungus* within, the hard Glands under the Chaps without dissolved: but the Patient not permitting me to keep down the *Fungus* afterwards as it arose, it quickly over-ran all his Mouth, and those Glands swelled again and Apostemated, and afterwards indurated amongst the internal Muscles of the *Larynx*, and hastned his Death. Yet long before that he admitted me to use the actual Caution, but so sparingly as it signified nothing. Indeed some Empiricks promised him great hopes of Cure by their Specificks: but he languished and died notwithstanding all our endeavours.

Thus another Person of about sixty years of age, having been long diseased with a Cancer on the left side of his Tongue, staid in the Country till it had corrupted one half from the root to the Tip of it, as also the *Ranula* and Salivals of that side, as well the external as internal parts. Then being at a loss what to do, he came up to London recommended to Doctor Walter Needham for

18. Observat. of a Cancer on the Tongue.

Cure; who, seeing his case so deplorable, advised him to consult others. He assenting to it, Doctor *Micklethwayt*, Mr. *Arris*, Mr. *Hollier* and my self met Doctor *Needham*. At a Consultation we proposed to palliate the Disease. But he declared to us that he came to Town with resolution to have the Cure attempted, though he died under it. We endeavoured to dissuade him from it; but he persisted earnestly in the having it attempted: to which we at last complied and agreed to cut off that part of his Tongue, and to cauterize the fordid Ulcer that lay on the side of his Mouth between that Jaw and his Tongue. To which purpose we presently sent for some actual Cautery, and in the presence of that Company I put into his Mouth a Raspatory, and, fixing it between the Root of his Tongue, and edge of that Tonsil, pulled away the corrupt Flesh; and then with Olive-cauterics burnt that to a crust. Having, as we supposed, consumed the Cancer there, I passed a Probe with a Ligature into the Ulcer under the Tongue, and brought it out above through a Tubercle, then, pulling his Tongue forward, I cut off the cancerated part as it lay, according to its length, from the Tip to the Root of the Tongue: and after I had permitted it a while to bleed, I cauterized it. We then gave him of a *decoct. hordei, cydon. &c.* to cool his Mouth, and treated him as hath been said in the preceding Observation. In this Patient the E scars separated, and the Ulcers digested, and that part of the Tongue near the Tonsil cicatrized; but the while a hard Swelling arose in his right Thigh, and became so painful, that he was forced to keep his Bed: the Matter fermented also in the salival Glands, and made Apostemations on the outside under the Jaws: of which together he languished and died.

These unsuccessful Attempts may render us extream cruel to those who feel not the misery those poor Creatures suffer with Cancers in their Mouths.

If the Cancer be but in some particular part, as the Tongue, Gum, &c. though the Patients have no certain hopes of being cured by Knife or Fire, yet they generally put it to trial sooner or later. How much more then shall these poor creatures, who have Cancers over-spreading their Mouth, eating and gnawing the Flesh, Nerves and Bones? who, besides the danger they are in every minute of being choaked with a fierce Catarrh, do suffer Hunger and Thirst; and if they can swallow Broth, Caudle or Drink, yet it is with an unfavoury tast, by reason of its passing through such sore corrupt Parts, from which putrefaction their stomach nauseates its sustenance, and their Spirits are infected with the stink, whence Fainting frequently happens; Sleep is a stranger to their eyes, their Slumber very troublesome, and Death is only their desire. At such a time as this it is not to be wondred if they try a doubtful Remedy, though painful. What I have attempted of this kind hath been at the earnest request of the Patients and their Friends, and by the authority of a Consultation of eminent Physicians and Chirurgeons. That the Cure succeeded not, must be imputed to the greatness of the Disease, and may teach others how dangerous it is to neglect the consulting the experienced Chirurgeon while the Disease is recent, and easie to be eradicated.

C H A P. XXII.

Of Noli me tangere.

Authors in their Chapter of *Cancer* do usually mention *Noli me tangere* and *Lupus*. These two most men esteem to be but particular names of a *Cancer* when it is fixed in some peculiar place: as in the Face, Nose or Lip it is called *Noli me tangere*; in the Legs and Shins, *Lupus*. Whence it is plain that our vulgar Language useth the name of *Wolf* in a large sense, applying it very often to the Breasts, and indeed any other place, where the *Cancer* groweth highly corrosive. I shall think it more instructive to the young Chirurgeon, if I appropriate this word *Noli me tangere* to a small round acuminate Tubercle, which hath not much pain, unless it be touched or rubbed, or otherwise exasperated by Topicks. Concerning which *Rogerus* saith, that *Cancer plus corrodit uno die quam Noli me tangere in uno mense*. But if so exasperated, it is immediately enraged, and becomes a true *Cancer*. Such as these are sometimes found in the Face and Lips: but do likewise happen in all other parts of the Body. I have seen them in the Arm. Particularly a Person of about sixty years of age, of a healthy Constitution, hath one in the outside of his right Arm, a little above the Elbow. He weareth a Cup upon it of a light wood, with Straps fastned to it, which brace it on, and defend the Part from the pressure of his Sleeve. He sent for me one morning to see it when he was in bed, his Arm lying out covered with a light Mantle. He turned up his Sleeve, took off the Cup, and shewed it me. The Tubercle was small, of a blewish colour, and looked as if it had been a *Varix*: it was without Inflammation, hardness, or change of colour in the parts about it. He did not permit me to look long upon it: the while I did, I saw it rise into a Tumour as big as a Kernel of a Hazel-nut. Such another I saw in the Arm of a Woman of about forty years of age of a blew colour, on the outside of her Arm: but it was not defended from the pressure of her Sleeve. I offered to undertake the Cure of them both, but they had been dissuaded by most of those that had seen them. I should not have doubted of good Success, having before seen a Person so diseased and cured by an Eminent Chirurgeon in his time, who by the application of an actual Caustery burned it to the Flesh, supposing it had lain no deeper; but after the separation of the Escar it rising again, he burned it deeper, and from that time it returned no more.

Descripti-
on.

While I was attending a Noble Family in the Country, a Person of quality in the neighbourhood sent his only Daughter of about eleven years of age to me. She was diseased with an unequal Tubercle upon her left Cheek, of the compass of a half Guinny when undisturbed; but if any thing were applied to it, it heated the whole Cheek. It was a great Blemish to her Beauty, upon which very account her Parents had much endeavoured to have it cured, or at least to be disposed to such a calm Temper, as it might bear a black Patch. Some weeks after the Lady her Mother brought her to London, and put her into the care of the late deceased Doctor Stanly and my self. He purged her with this: *R. fol. senæ ʒijss rhabarb. ʒj. sem. fœnic. dulc. ʒss. salis tartari ʒj. infund. in aq. cithorei cum succo aurantior. colat. ʒij. adde syr. de pomis purg. ʒj. Misce.* This was repeated often. *Merc. dulc. & ceruss. antimonii* were also given her at distinct times, and distilled Milks, such as have been set down in the Cure of *Cancers*. I begun my Application with this; *R. litharg.*

Observat.

auri

auri ʒij. sem. cucurbit. excorticat. ʒ ss. aceti vini q. s. tritatur in mortario in formam unguenti addendo camph. dissolut. in aq. ros. gr. vj. This was applied spread thin upon Sarfenet: but it immediately swelled and heated all the Cheek. I then took it off, and anointed the inflamed Parts about the Tubercle: but it did not agree with it. We wiped it off again, and by exposing it to the air it cooled, and returned in a day or two to its former temper. After I had tried several Medicaments unsuccessfully, a Friend gave me a black concreted Juice to work into a Paste to cover the Disease, it being all the Mother then desired from me: and this being laid upon it, adhered to it as if it had been Pitch, and seemed to agree well with it. But after four or five days it heated her Cheek, and was taken off. Upon which the Mother grew impatient, and had some thoughts of going with her Daughter into Gloucestershire to a Man there who pretends to the Cure of Cancers. Which coming to my knowledge, I made an offer to Doctor Stanly to undertake the Cure by extirpating that Tubercle by the actual Cautery. But he replying, that the very mention of it would fright them out of Town; I then proposed it by Caustick to the Lady-mother: which she accepted upon a promise not to do it while she was in Town, nor then till I heard from her in the Country. Some while after she went into the Country, and wrote to some of her Friends to see the work done. Upon the receipt of which I met Doctor Stanly and them; and, having placed the Patient in a clear light, I drew a line with Ink how far I intended to burn, and they took the compass exactly in a piece of Paper, which they kept. I began with a Caustick-stone pointed, and pressed upon the middle of the Tubercle, burning deep into it; and, to quicken the work, I touched it with *ol. vitrioli* upon a Stick, and then with the Caustick-stone interchangeably, till I had consumed the Tubercle and the parts within the marked Line. The while I was thus working, I dried up the Salts which mixed with the Ichor with armed Probes. Having thus finished the work as I designed, to the satisfaction of the Physician and Relations, I washed out the Salts of the Caustick with Wine warmed, then divided the Escar, and washed it again with Milk, till I had freed the Escar and the Part from pain: then I dressed it with *unguent. basilic. cum oleo ros.* on a Pledgit, and applied an *Empl. è bolo* over all. By these Lenients the Escar separated, and left a deep round Ulcer: which in few days I digested with *unguent. basilic. magn. & Merc. præcip.* and incarned and cicatrized with *unguent. rutiaë, &c.* but within ten days after it broke out again. We repeated purging with *calomel. Bezoard. miner. &c.* and healed it up with a firm Cicatrix by the aforesaid method, adding a few drops of *tinct. vitrioli. dulc. in aqu. rubi.* From which time it hath continued well, she not having worn any Mouch upon it of late years. I have now under cure one of this kind; but, it not being perfected, I shall insert it in the Treatise of *Strumæ*.

CHAP. XXIII.

Of Waterish Tumours.

Waterish or Hydropical Tumours are the effects of an extravasated Serum, which according to the place on which it lights doth denominate the Disease.

If it fall inwardly into the Cavities of the Bell, it is *Hydrops ascites*; of the Thorax, *Hydrops pectoris*; of the Skull, *Hydrocephalus*: which name it also retains

retains if it affect the outward parts of the Head. When it is lodged between the Skin and the Flesh, or in the Interstices of the Muscles, it is *Anasarca*: in the *Scrotum*, *Hydrochele*, or *Hernia aquosa*, &c.

Waterish Tumours that are external differ from the Phlegmatick by their shining and the manner of their pitting. Hydropical Swellings, if they be pure, do glister and are pellucid, they take impression easily, and do as soon lose it. *Oedemata* receive the impression easily also, but they keep it longer. The transparency in the surface or change from the natural colour in the Skin is less than in the other. But these Humours are very apt to mix both in the *Anasarca* and other Swellings; which where they do, the Symptoms are confounded.

Ascites differs from *Tympanites* by its weight, and the swagging of the water in the Belly; whereas the Tumour in a *Tympanites* is more light, equal, hard, and, say Authors, sounds like a Drum.

Causes of Waterish Tumours are whatever may either increase the *Serum* Causes: of the Blood beyond its proportion, or restrain it in part of the Body preternaturally, so that, wanting its natural course, it stagnates in some one or more places. Of the former sort are ill Digestion in the Stomach; defect of Sanguification, which is frequent in intemperate persons; also great Hæmorrhagies, where the Blood, being weakened by much diminution of its quantity, is not able to digest the Aliments assumed, but lets them run into *Serum*, from which Cause alone several waterish Tumours arise; so also any defect in the Ferments of the *Viscera*, as when the Kidneys do not separate the *Serum* from the Blood, or the Conglobate Glands do not their office; likewise too great acrimony in the Blood, which, though hot in it self, yet melts down the Blood into a thin *Serum*, as in hot Catarrhs. Of the latter sort are, 1. a check of transpiration through the Pores of the Skin, which keeps in a greater part of the thinner *Serum*, and forceth it to stop in the Body: 2. retention of Urine: 3. the forming of some *Cystis* in which it is contained: 4. its extravasation in any part of the Body, external or internal.

Waterish Tumours are, as we have reckoned, internal or external.

The Internal ones are described in Physick-Books; and their *Signs* shall be *Signs* given particularly by me as I have occasion.

The External, if they be pure indeed and very much external, do by a visible resplendency betray themselves to the eye; those especially that lie near the *Cuticula* and *Cutis* making a very thin pellucid Tumour. Those that lie deeper under the Skin do shine less: yet in some of them, if in a dark room you shade them, as Women do an Egg with their hands, and hold a Candle to the other-side, you will find at least a faint transparency. Those that lie yet deeper, or are contained in a *Cystis*, do not discolour the Skin at all, nor cause any considerable pain: but if the Swelling be large, you may by shaking it perceive an undulation.

Watery Tumours as such portend no danger to the life of the Patient, unless *Prognostick* the *Viscera* be obstructed or otherwise tainted. If such Obstructions or Corruptions happen, the measure of the danger is to be taken from the degree of the Corruption. Those inward Tumours are more dangerous than the outward; and the more noble the Part affected, the more important the danger.

In the *Cure* of these Tumours there are four Intentions required.

The first consists in a regulation of Diet and manner of living: the second, in evacuation of those serous Humours by Stool, Urine or Transpiration: the third, in rectifying the Concoction, and restoring the *Viscera* to their natural state: the fourth, concerning the Tumour it self, is performed by *Discutients* and *Exsiccants*, or by *Apertion*.

1. The Diet ought to be with great moderation, excess in eating or drinking

king being prejudicial to their Cure. As to the quality of it, Physicians generally prescribe it drying and attenuating, such as hath been proposed in the Chapter of *Oedema*; and after that manner they ought to regulate their way of living: yet it is not unfrequent to see those Tumours arise from a hot Cause, in which case cooling Diets are requisite.

2. The second Intention is usually performed by Purging with such things as are prescribed in Oedematous Cases. Only here there ought to be a more particular regard had to the *Hydragoga*, as *elaterium*, *camboya*, *sambucus*, *ebulus*, *rad. bryoniae*, *syr. de spina cervina*, &c. If the Cause be hot, Bleeding and Barnet Waters may be necessary, of which you may find some Instances.

3. The third Intention, of restoring or rectifying the *Viscera*, ought to be the work of the Physician.

4. The fourth Intention is, of removing the conjunct matter by drying and discutient Medicaments; for which all those set down in Oedematous and Flatulent Tumours are suitable. R *summitat. abrotani, absinth. origani, calamint. majoranae*, an. M. ij. *flor. sambuci, chamæm. anthos, ros. rub. an.* M j. *baccar. lauri, juniperi*, an. ʒij. *coquantur in f. q. aquæ font.* to which may be added Wine, Vinegar, Salt, Sulphur, or Alume. Or you may make the Decoction in the common Lixivie, if the Tumour require it. You may also embrocate with such like; R *salis nitri ʒx. piperis albi ʒvj. euphorb. ʒij. ol. laurin. ʒvj. Misc.* and apply this over the Part affected; R *sem. anisi, cumini, bacc. myrtil. lauri*, an. ʒss. *succi ebuli ʒiv. ol. rutac. & ceræ q. s. fiat Ceratum.* If by application of these or the like Medicaments the Cure succeed not, it may be reasonable to make Apertion, and give vent to the Water, and proceed in the Cure as shall be shewed in the following Observations. Where the *Hydrops* hath affected the Breast, I have not seen any Operation attempted by letting out the Water, the Disease it self being rarely discovered till after the death of the Patient. In some such I have taken out about a Gallon. Nor is there often found better success where the Water affects the Belly, as in the *Ascites*: it being for the most part the product of long chronick Diseases, which either took their original from or ended in Obstructions of the *Viscera*; in which cases the Cure usually depends upon the Physician; the best assistance of the Chirurgeon being that of Bandage, which, if applied even to the whole Belly by a strong Dimitee or *Holland* Bracer made to encompass the *Abdomen*, and tied or laced behind, may conduce much to the prevention of a sudden increase of the Swelling.

The like or greater success we may hope for in Anasarcaous Swellings, where the Legs, Arms, Hands, &c. are affected, to which a streight Stocking, Sleeve, &c. being accommodated doth usually repress the Humour, and dispose it to be carried off another way by Medicine.

Where the *Ascites* follows *Hæmorrhagiæ*, Fever, or any acute Disease it admits more often of Cure: but those of our Profession are rarely consulted while there is hopes thereof by internal Remedies, which is so long as the Patient hath strength to bear them. At last, when the *Viscera* are tainted, the evacuation of the Water hastens their deaths, and the Operation is scandalized: whereas if the *Paracentesis* were made in time, better success might be expected.

The way of making a *Paracentesis* or Tapping, hath been variously set down, according to the several fancies of Chirurgeons. Some have made the Apertion in the Navel by Bodkin, Needle, &c. others three fingers below it on either Side, chusing that on which the Patient did least lie; for the Orifice ought to lie uppermost, to prevent too great an effusion. Those that open below the Navel have likewise devised several ways. Some take up the Skin, and perforate that first; then make a Perforation in the *Peritonæum*. A method not practicable

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cable where the Belly is very hard and stiff with much Fat between the Skin and Muscles. Therefore it is that we generally strike through all at once. The worst way is by Caustick, and Incision after that.

But the down-right Puncture, being the best of Cures, is to be so managed as that the *Serum* may not fly out all at once, but be retained according to the desire of the Chirurgion; nothing being so pernicious to the Patient as great Evacuations, though of an excrementitious Humour. Hence it is that much Art hath been used in this affair as to designation of quantity, and contrivance of Instrument. *Barbett* hath lately publish'd the Use of an Hollow Needle, which being thrust in, will let out what quantity you please; but being pull'd out, leaves little or no passage in the Skin. The repeated intrusion of this into the same or into fresh holes (say he and *Silvius*) will evacuate Water at your pleasure. Truly, the whilst the Belly is distended with abundance of Water, it may succeed well: but they themselves dare not pretend farther than the evacuation of half the Liquor, for by that time you will be in danger of wounding the Intestines. Several Experiments I have made of that Instrument, and one lately, rather to satisfy the Patient and his Relations that the Swelling was an *Ascites*, than that we could propose any Cure by it. I made the Apertion in the presence of Mr. *Hollier*: We discharged about a pint of Water, and part of that by a Catheter; for, feeling some opposition in the cavity within the *Abdomen* which obstructed the flowing of the Water, I pulled the pointed *Cannula* out: And it was well I did; for afterwards, in Opening the dead Body, I found the Intestines floating above the Water, though there were above two gallons in the Belly. Upon which Observations, I do conclude it a very unfit Instrument to discharge a Dropsie: besides, our People will not admit of so many Openings as would be necessary to empty an Hydropical Belly. This very Person, as earnest as he was at first for the Operation, chose rather to die with the Water in his Belly, than suffer a second Apertion.

I therefore do conclude the good old way of a *Cannula* made taper-wise with holes in the side, whose description you may find in *Pareus*, to be the best; which being conveyed through a hole made by Puncture, may be kept in by Bandage till the Water be evacuated, the hole of it being stopped by a Screw or otherwise, as you will find in the aforesaid Author. I shall now give you some Observations of this Work, though it be for the most part unsuccessful; as indeed what can be expected from rotten *Viscera*?

A Woman near fifty years of age, of a gross Body and strong Constitution, laboured of an *Ascites* a long time: after much Physick ineffectually taken, the Water burst its way through the Skin by a small Opening on her right Side, near the place where we usually make the *Paracentesis*; and after some days, the Aperture wearing larger, the Water flowed more abundantly. I was fetch'd, and stopp'd up the Orifice with a Tent of Lint, applying a Pitch-plaster, and over that another of Yeast and Wheat-flower, with Compress and Bandage. Then I advis'd her to lie on the contrary Side, by which that part was kept dry. The fourth day I opened it, and gave vent by a *Cannula* to three pints of Water; then bound it up again. As the Belly emptied, the Opening contracted: Therefore I put in a *Cannula*, retaining it in with Compress and Bracer, and thereby discharged the Water at pleasure, and afterwards left it to her own and her Servants ordering. I visited her some while after; and, finding most part of the Water discharged, I took out the *Cannula*, and permitted it to cure. The Water seeped out sometime upon rising or lying on that Side; but she was a strong Woman, and recovered.

R

A Young,

2. Obser-
vat. of
Ascites.

A Young-Man of about eighteen years of age fell from a Fever into a Quar-tane Ague, which held him long, and ended in an *Ascites*: his Belly swelled exceedingly, and he became extenuated. While he languished in this deplorable condition, one undertook the Cure of him, by letting out the Water with a Thorn thrust into his Navel, (though it were not at all swelled up.) The Water was let out gradually, and a sticking Plaster only applied over it. Thus in a month's space it was evacuated, and the Belly contracted proportionably. During this Evacuation he took opening Broths and Apozems. After the Water was discharged, and the Puncture cured, he continued extremely emaciated, and the Skin of his Body and Limbs was withered; yet he was ordered to be let blood about six ounces: at which time he was so very a Skeleton, and his Skin hung so loose, that I doubted how I could hold it over the Vein to open it. Yet after this I saw him Fat, and perfectly cured.

3. Obser-
vat. of
Ascites.

A Gentlewoman of about thirty-eight years old laboured of an *Ascites* with Anasarcaous Swellings on her Belly, Thighs and Legs; and, having taken much Physick unsuccessfully in the Town, was removed to her House in the Country to die: but after some while, being tired with the weight and stretching pain of her Belly, she sent for me to give vent to the Water. I went provided for the work, and found the Patient resolved to undergo the Opening. Other Symptoms to encourage me I had none. The next morning, she having prepared her self, and being placed on that Side she could best lie upon during the Evacuation, her Bracer being well fitted, I made the Perforation according to custom three fingers below the Navel on the upper side. The Water spurted out forcibly whilst I passed in my taper-pointed *Cannula*, which fitting exactly, I let out about three pints of Water, then applied an *Emplastr. ad herniam* over it, with a Stupe wrung out of a carminative Decoction, and Bandage. She seemed somewhat relieved at the present, but rested ill that night, and was much indisposed in the morning, yet would have more Water let out. I discharged two quarts of Water, and dressed it as before.

After I had continued there three or four days, and shewed the Servants the manner of letting out the Water and dressing, I returned to London. After a few days, going back, and finding her Belly very much sunk, and the Water not over-ready to flow, I took out the *Cannula*, applied a Pledgit of *unguent. basilic.* and an *Emplastr. ad herniam* over it, with a warm Stupe and Bracer, as before. I left her weak, and not like to recover; and indeed she died a few days after.

4. Obser-
vat. of *A-
nasarca* in
the Legs,
&c.

A Gentlewoman of about thirty years of age, big with Child, was much diseased with Anasarcaous Swellings in her Legs and Feet. Sir *Fr. Pr.* was sent for; who seeing her in such a condition, and unfit to take Physick, desired my Opinion concerning them. I saw the Swellings pale and shining, yielding to the impression of my fingers, and returning slowly. She was very uneasie in her bed, and not in a condition to sit up. I proposed Fomenting, with good discutient and exsiccant Medicaments, to dispose them for Bandage, and then to put on Laced-stockins and Trouzes. After he had a while considered of it, he wished me to write a Form of the Fomentation; which I did thus: *R summitat. absinthii, majoranæ, origani, rosmarin. an. M. iv. flor. chamæmeli, sambuci, ros. rub. an. M. ij. baccar. lauri, juniperi, an. ʒiv. sulph. vivi, aluminis rup. an. ʒiʒ. salis com. M. iij. coq. in f. q. aquæ pro usu.* He gave way to the use of it and the Bandage. I began the next morning with the Fomentation, causing her Legs to be bathed, then rowled them up from the Feet above the Knees equally streight. After I had repeated this Method three or four days, and disposed her Legs by Bandage for the Laced-stockins, I saw them laced on with Knee-pieces and Trouzes: these were daily streightened to such proportion as the Patient could easily bear. By the wearing of these she recovered

the

the use of her Legs, to the great advantage of her health. She went her full time, and was deliver'd of a healthful Child, which is yet alive.

A Gentleman having long labour'd under a complication of Diseases, particularly a Dropsie, sent for me. I found his Body much extenuated, his Legs anasarcaous, and his Back and Hips excoriated with lying in bed, I propos'd to him the use of a Fomentation, and equal Bandage, viz. a pair of Laced-stockins. After some reasoning with me about the use of them, he complied, and I caus'd a pair to be made, and laced them on. They were easie, and did all I design'd by them. He was able to walk to his Closet, and take the air in his Coach, and was well pleas'd with them. But afterwards, being inform'd by some-body of great inconveniences that might happen to him from the wearing of them, he caus'd them to be pulled off: upon which his Legs swelled again, and he was confin'd to his Bed, whereby his Hips and Back galled: also, by reason of the great encrease of those Waterish Swellings, the Native Heat was overcome, and a preternatural one arising, inflam'd and blister'd them. I was fetch'd, and by Fomentations, &c. got off the Mortification, and in six weeks heal'd the Ulcer and Ulcerations. I made him a Fontanel by Incision in his right Leg, and put him on the Laced-stockins again, by the use of which he recover'd.

A Young Woman of about twenty-five years of age, of a healthful Constitution, came to me out of the Country, suppos'd to have the *King's-Evil*. Upon enquiry I found none of that *Evil*, but a large Tumour lying upon the Muscles of the Back: the Skin of the Tumour was thick, without inflammation or discolouring.

I was then in quest of Windy Tumours, and thought this might be one, having Symptoms not unlike it, the Sound excepted. I had a great desire to see what it was which made that bulk, and offer'd her the Cure of it gratis: which she gladly accepting, I order'd my Servants to make ready Astringents and Bandage. Then I made an Apertion into it with a Knife, upon which a Water forc'd out: we receiv'd it in a Chamber-pot. Whilst it was discharging, I slit up the Tumour, and gave way to the Dregs, which were like Honey, but not contain'd in a *Cystis*. I cut off as much of the Skin as was superfluous, and brought the rest together, dressing it up with the common Digestive *ex Terebinth.* &c. with a restrictive Emplaster, Compress and Bandage. Being thus dress'd, she walk'd with her She-friend, more briskly than she came, to her Lodging in *Shooc-lane*; from whence she came to my House the third day after, to be dress'd, and so daily till the Wound was cur'd; which heal'd by agglutination in less than three weeks.

OF Waterish Tumours, *Hydrocele* is one very remarkable Species, which subdivides it self into many others.

It may be generally defin'd, a Waterish Swelling of the *Scrotum*.

This may be either part of another more general Tumour, or else an original Disease of that place. When it is part of another Tumour, the Body is Hydropical, viz. either Anasarcaous or Ascitical: in both which cases it is frequent to see the Cod swell'd up after the manner of an *Anasarca*. And indeed, when in Ascitical cases we find a Swelling of the Testicle, there is for the most part an *Anasarca* of the lower parts of the Belly join'd with it. When it is an original Tumour of the Part, it either lieth without the *Tunica vaginalis*, affecting the whole *Scrotum*; or else is contain'd within the said Tunicle, or at least in a *Cystis* of its own: in which case you will find one side swell'd, whilst the other remains in its natural state; or if both Testicles are concern'd, the Tumours are distinct.

5. Observat. of the Legs.

6. Observat. of a Watery Tumour in the Back.

Definition. Differences.

Causes.

The *Causes* of *Hydrocele* are the same with those of a Dropsie, at least when it is part of a Dropsie. But when it cometh alone, it is generated as all other waterish Tumours are, viz. by a separation of *Serum* out of the Arteries, which never returneth into the Veins, but lodgeth in the Skin or other Parts of the Body. This Extravasation may be caused from some Bruise by Blow, Fall, &c.

Signs.

Signs of an *Hydrocele* may be taken from the Distemper of them: Viz.

1. The Anasaruous *Hydrocele* may be known by the splendour, softness and thickness of the *Scrotum*. It taketh impression from the fingers easily, and may be wrought like soft Wax. The Prepuce is usually swelled, if it attend the Dropsie of that name.

2. The simple *Hernia aquosa*, as it affects the whole *Scrotum*, fills it like a Bladder, and discovers it self by its shining.

3. When the *Hydrocele* lieth within the *Tunica vaginalis*, between it and the Testicles, or in a peculiar *Cystis*, the *Scrotum* is proportionably stretched, and somewhat wrinkled; and indeed, at first sight, it is not unlike an *Hernia intestinalis* or *zibalis*: but you may distinguish them by pressing with your fingers upon the Production; which when you do, bid the Patient cough: if nothing press upon your hand like Wind, it is an *Hydrocele*. If the Water be lodged in the *Tunica vaginalis* of both Testicles, the Swelling appears double.

Prognostick.

This Disease is more or less dangerous according as it is complicated. That which is joined with a Dropsie cannot be cured, unless that be first cured: yet it sometimes serves to discharge anasaruous Swellings in the Parts lying above it. Those which arise from an external Cause are more easily cured. If the Habit of Body be tolerably good, the *Hydrocele* may be cured; and if it be bad, the Water may be let out as often as it fills, without danger.

Cure.

In the *Cure* of these Tumours there is required a regulation in Diet and manner of living, as hath been set down in the preceding Discourse of *Waterish Tumours* in general: only here they are to be proportion'd according to the greatness of the Malady, and the Accidents that attend them. They also require to be treated with such Discutients and Exsiccants as have been there proposed, and you must retain your Applications close to the Part to which they are applied. A Bag-truss is necessary, it serving also to sustain the Part, lest by the weight of the Humour the Tumour be encreased: also after the discharge of the Water it furthers the corrugation of the *Scrotum*.

While the Swellings are small, they may happily yield to Discutients. An accidental Bruise, by stirring up an Inflammation, hath sometimes disposed them to discussion. If they tend to Suppuration, further it by Suppuratives, as in a *Phlegmon* hath been shewed, and treat them as such. But if the Tumour have any quantity of Water in it, your speediest way of Cure is by giving vent. If it be an *Anasarca* that possesseth the whole *Scrotum*, the way to discharge it is either by Scarification, or by a Seton.

Scarification is proper when only the *Scrotum* is Anasaruous. If it be made by Puncture with a Lancet, the Water will discharge in few hours, and the Wounds agglutinate soon after, without other Application than a warm Stupe. An Instance whereof you may see in the Observations of *Oedema*.

If there be an *Anasarca* of the Belly, the Seton is most proper, in consideration of the Time which is required for such an Evacuation. It ought to be made transverse the *Scrotum* in the depending Part. It is to be kept open till the Serosity be discharged; and the while you are to preserve the Native Heat of the Part by the application of warm Stupes wrung out of Wine wherein have been boiled *summitat. absinthii, majoranæ, flor. chamæm. ros. rub. balaustr. bacc. myrtyl. nuc. cupres. &c.* And take care lest the *Scrotum* excoriate from the sharpness

sharpness of the Humour, and inflame: for in Hydropical Bodies it is apt to gangrene. If you apprehend such mischief, pull out the Seton.

In the Opening the other Species of *Hydrocele*, you are to consider the quantity of Water, and the place it is lodged in. If it have not a pint of Water in it, forbear opening it till it be bigger, lest you hurt the Testicle: besides, it is not worth the while. But if it be a Child that labours of it, you may open it though there be scarce half a pint of Water. In order to the Opening them, you are to place the Patient in a clear light; then with the one hand to press upon the Production, that the Tumour may be more tense: and if the *Hydrocele* be in a Man, your Servant ought to press with his hand upon the other side, that the *Scrotum* may be the more steady. You are to make the Puncture in the depending Part, and avoid the cutting of the greater Veins lying upon the *Scrotum*, lest thereby the Water be made bloody, and you be thought to have hurt some Part within. You are to make the Apertion big enough to receive a small *Cannula*, which you are immediately to put in, and keep it there till you have drawn out all the Water. That done, apply a Pledgit of *unguent. basilicon*, and an Emplaster to retain it on, with a Flanel Stupe wrung out of an astringent Decoction, and put such a Bag-truss on as may keep your Dressings close. By this Method you will in two or three days find the Puncture cured, and the *Scrotum* contracted. Yet it may be reasonable to apply an *Emplastr. Cæsaris*, or some other astringent Emplaster, over the *Scrotum*, and to put on a less Truss, which the Patient may wear for more security. For they are apt to fill again with Water once in a year or two, if the Habit of Body abound with serous Humours.

If the Water be lodg'd in a *Cystis*, or within the proper Coats of the Testicle or Testicles, they require accordingly to be opened distinctly. And in these *Hydrocele's* you are to be careful to pass in your *Cannula*, and keep it in till the last drop of Water be discharged: for if by any accident it slip out, you will scarce get it in again; the inner Tunicle hanging loose, the holes may not answer each other; nor is the Tumour capable of being opened so well again as at first; and if you leave any Water behind, the Operation will be thought ill done. The Water discharged, you are to proceed in the Cure as abovesaid. What hath been hitherto delivered of these *Hydrocele's* doth only concern the palliative Cure.

If you purpose the perfect Cure, you ought then to make the Apertion large on one side of the *Scrotum* reaching towards the Production, in such manner as it may lie according to the length of the Testicle, that you may open it after the Water is discharged, and thereby the better apply your Medicaments to it in case it be affected. In these Operations the Patient should be of a tolerable good Habit of Body, and in his not declining age: for whether they be made by Incision or Caustick, they are generally subject to Inflammation, Colick and Fever, till Suppuration be made. In which case Bleeding and Clysters are necessary, and outwardly Lenients and Anodynes are to be applied, also good Fomentations to keep up the Natural Heat: of which you will find some Instances amongst the following Observations.

A Boy of about six or seven years old was brought to me labouring of an *Ascites*, with an *Hernia aquosa in Scroto*, and Anasarcous Swellings possessing the outside of the *Scrotum* and Prepuce. I made an Apertion on the left side of the *Scrotum* in a depending Part, and, passing in a *Cannula*, discharged near a pint of Water; then fomented it with warm Stupes wrung out of red Wine. While I was fomenting it, suspecting the Anasarcous Humour would soon fill up the *Scrotum* again, if the Apertion were not kept open, I therefore without delay

1. Obser-
vat. of
Hernia
aquosa
with an
Anasarca
and *As-*
cites.

delay thrust a Seton-needle with a small twist of Silk through the Aperture before made, and passed it out transverse the *Scrotum*, about an inch distant from the first opening; then cut off the Seton from the Needle, and tied the ends together, fastening them with an Emplaster above upon the *Scrotum*, and trussed it close with a warm Flanel Stupe, covering also the *Penis*, and dismissed them with directions to stupe it at least thrice a day with a *Decoct. absinth. flor. ros. rub. &c.* as it is proposed in the Method of Cure. If in this case the Stupes be not often shifted, the serous Humour, which so continually drops into it, will excoriate the *Scrotum*, and stir up a painful Inflammation. Some few days after I visited the Patient, and saw the Swelling in the Prepuce and *Scrotum* discussed, the Seton having well discharged its part. I cut out the Seton, and dressed the Ulcers with *unguent. tutiæ*, by which they healed; and by the continued use of the Fomentation in a few days the *Scrotum* contracted.

2. Observat. Of Hernia aquosa with Anasarca. A Gentleman of about sixty years old came to London diseased with a *Hernia aquosa*. The lower parts of his Belly and upper parts of his Thighs were Anasarca: the Prepuce and *Scrotum* were not free from it. Sir Fr. Pr. being his Physician, advised the opening of the Tumour, and was present the next day: where, having all things ready, I placed the Patient in a Chair to the light, the Physician laying his hand upon one side of the *Scrotum*, while mine was on the other side. I made a Puncture in a declining Part, then passed in a *Cannula*, and let out about three pints of Water in a Bason. It was much of the colour of Urine in healthful People. The Water discharged, I pulled out the *Cannula*, and applied a warm Stupe, and trussed it up close. In the space of two or three days the *Anasarca* discussed, and the *Scrotum* contracted and cured. I applied an *Emplast. Cæsaris* over the *Scrotum*, and fitted him with a Truss accordingly. Two years after I opened this Tumour again.

3. Observat. Of an Ascites with Anasarca. A Man of about forty years of age, of a strong Constitution and sanguine Complexion, being of late years Asthmatick, was about two months since swelled with an *Ascites* and an *Anasarca* of his Belly, *Scrotum*, Thighs and Legs. Dr. Denton and Dr. Brook were his Physicians, and consulted me in the Chirurgery, especially in that of the *Scrotum*, which was very much distended (as we supposed) with Water, the external Parts being (as I have said) Anasarca.

I proposed Scarification, in order to the present discharge of the *Anasarca*: but, in consideration of the necessity that appeared of continuing a vent to the serous Humours, which would most certainly affect the *Scrotum* whilst any thing of the *Hydrops* remained in the Parts above, we resolved upon the use of a Seton. To which purpose the Patient was seated upon the side of his Bed, and a Bason placed under the *Scrotum*. I raised up the Anasarcaous Skin, and, whilst Dr. Brook held part of it, passed through the Needle with a twisted Silk. Immediately upon the Apertion there discharged a bloody Serum, (as it seemed to us by the candle-light,) which we permitted to flow to the quantity of at least a pint and an half: during which the colour not changing, we stepped to the Window with the Bason, and saw it a pure florid Blood; so also was that which flowed the while into a Porringer. Upon sight whereof, I pulled out the Seton, and placed a Servant's finger upon the two Apertions, till I hastily made Dressings ready of *farin. tritic. cum albumine ovar.* spread upon a couple of Pledgits and upon linen-cloth in the form of a Plaster, which I applied upon that part of the *Scrotum* with Compress and Bandage, whereby the bleeding was stopt. We did not perceive that he was the least discomposed by the Evacuation. The second day after we met again, and saw the Patient walking in his Chamber marvellously relieved both in his breath and strength. He formerly took his rest by leaning upon his Knees and Elbows; but

but that night he slept lying down in his Bed, and had discharged in our absence above a gallon of Urine well coloured, and made more than a quart during our being in the House. In the taking off Dressings the Apertions were seemingly healed, and had not bled one drop after the application of those Emplasters. We fomented the *Scrotum*, and trussed it up. His Physicians prescribed Antiscorbutical-Juices, Cordial-Juleps, &c. The second day after we met again, and, seeing the *Scrotum* big, made Scarification by puncture of a Lancet. The Blood trickled down apace; but after a while it stopt, and a *Serum* flowed forth. A warm Stupe was applied, and renewed often, and continued the most part of that night; during which the *Serum* was plentifully discharged, and he urined well. At our next meeting, which was within two or three days, we found our cure succeed well; but the *Scrotum* was big, and likely to be so whilst there remained any Water in the *Abdomen* or Parts about. Upon which consideration we were inclined to make a Seton again: but suspecting a new effusion of blood, we contented our selves at that time in making an Apertion with that Spear-pointed *Cannula* described by *Barbett*. It bled at first opening about two ounces, then gleeted a serous Humour. We dressed it as before, and thereby the *Serum* was discharged for the space of three or four days; during which the Patient removed from his Lodging at *Lime-house* into the Town, nearer his Physicians. Then we again pierced the *Scrotum* with a round Needle and twisted Silk, whereby the Bleeding was restrained, and the Serosity discharged, but the *Scrotum* from that time began to indurate, and thereby streightned the Seton, and stopt the Water in its passage. Upon sight whereof we fomented the *Scrotum* with Emollients and Discutients, viz. *ex foliis & radic. althææ, bryoniæ, cucumeris sylvest. summitat. ebuli, flor. sambuci, sem. sænægræci, &c.* and of the *Fæces* made a Cataplasim, with an addition of *farin. bord. lentium, axung. porcin. &c.* During these applications the Patient was purged with *Hydragoga* once in two days, whereby great quantities of Waterish Humours were each time evacuated. The Juices were also repeated those days he intermitted Purging. Thus the Patient was daily relieved, the hardness in *Scrota* resolving as the Seton digested, and indeed the *Scrotum* was well-nigh restored to its natural bigness. We then designed Scarification of his Legs, to evacuate that *Serum*; but he not permitting it, we fomented them with Discutients; and embrocating afterwards *cum oleo olivar. aceto & sale*, we rowled them from the Toes upwards; and having that way disposed the Parts for Streight-stockins, we laced them on, and fitted Laced-trouzes to the Thighs. During which, the Patient was frequently purged, to much advantage; yet the swelled Thighs and Legs did not yield to our Bandage, but continued hard and painful. He was also streightned in breathing, and often delirious, and too much debilitated to bear so frequent Purging as was requisite to evacuate the daily encrease of Water. Upon which consideration we scarified his Legs and Feet, and by the application of Cupping-glasses discharged a quantity of bloody *Serum*; from which time the evacuation of *Serum* was continued by the application of warm Stupes and Emplasters. About ten days after, having notice that his Legs and Feet were exceeding painful, I made him a Visit, and found him upon his Feet: his Stockins being pulled off, I saw his Legs inflamed, and in one place livid, and the very Toes inflamed, also blistered, and in some parts livid. I scarified them, and fomented them with *decoct. summ. absinth. flor. ros. balaust. in vino rubro*; then dressed the Scarification with *unguent. basilic. hot*, and applied *cerat. Galeni*, with moderate expulsive Bandage from the Feet to the Knees; then put him into Bed, placing his Legs upon Pillows, to prevent the descent of Humours. The next day the Patient was let blood about ten ounces, from which time he began again to urinate plentifully,

fully, and thereby was freed of the *Delirium* and difficulty of breathing ; the Inflammation of his Legs and Feet went off, and those Ulcerations healed : yet there afterwards appeared a small collection of Matter upon one of his Legs ; which being discharged, and disposed to cure, the Patient was again purged, and is at this present in a hopeful way of Recovery, his Belly, Thighs and Legs being soft, and in a manner restored to their natural state, and his Physicians are sending him into the fresh Air to perfect his health.

4. Obser-
vat. of
Hydrocele.

A Gentleman of about twenty-seven years of age came to *London* diseased with a Swelling in *Scroto*. Dr. *Walter Needham* was his Physician. It was soft, and possels'd the Tunicles of the right Testicle, making a Swelling only in that Testicle. It did not shine, as the simple *Hernia aquosa* is wont to do. We made compression upon the Production of that Testicle, and concluded the Tumour Water, and lodged within the proper Coats of that Testicle, the other lying unconcerned. We made an Apertion in the declining Part, and, passing in a *Cannula*, discharged about a quart of Water, all that was in the *Scrotum* : then pulled out the *Cannula*, and applied a Pledgit of *unguent. basilic.* and an Emplaster to retain it on, with a hot Stupe wrung out of Wine, and trussed it up close. By which Method of Dressing the Puncture cured, the *Scrotum* contracted, and he returned cured.

5. Obser-
vat. of
Hydrocele.

A Person aged fifty-eight years, having been long troubled with a large Tumour in *Scroto*, desired my Advice. The Production of the *Peritoneum* on the right side was much dilated. I press'd upon it with my hand ; and upon his Coughing, felt nothing of Wind. That Testicle was lodged within the Tumour, so as I could not feel it. The Tumour was soft, and without Pain. I concluded the Disease to be Water lodged within the *Tunica vaginalis*, or some particular *Cystis* encompassing the Testicle ; the other Testicle and Production being unconcerned, and the *Scrotum* thick, as is usual in such cases.

I propos'd the letting out of the Water ; but he desired time to consider of it. After two or three days I was sent for again, where I met Sir *Charles Scarburgh*, Physician to His Royal Highness the Duke of *Tork*, and one of His MAJESTY's Physicians, and Dr. *Denton*. We together considered the Tumour ; and they, being satisfy'd that it was Water, encouraged the Patient to admit the Opening of it. I, having all things ready, made a Puncture in a declining Part, and, passing in a *Cannula*, discharged near two quarts of Water, dressing it up as above-said. I opened this Tumour afterwards twice in the space of four years.

6. Obser-
vat. of
Hydrocele.

A Gentleman of about sixty years of age, labouring of an *Hydrocele*, was commended to me by Dr. *Morison*, His MAJESTY's Botanick. The Swelling was within the Tunicles of the right Testicle, the *Scrotum* thick. I let out the Water by Puncture and *Cannula* ; it was about a quart : then dressed it as above-said, and the third day applied a restrictive Emplaster over it, with Compress and Bag-truss, and within a few days after dismissed him cured of his Disease.

A year after or thereabouts the aforesaid Person came to me again, the *Scrotum* being replete with Water. I opened it, discharged the Water, and dressed it as above-said, and thought him well, and gone out of Town. But after some days, accidentally hearing he was sick and kept his bed, I hastened to him, and found him afflicted with a Colick and Fever : the *Scrotum* was also swelled and inflamed. I ordered him a Clyster, let him blood, and applied an Anodyne Cataplasim. By these means the Pain was mitigated, and the accidents of Fever, &c. ceased : but the *Scrotum* remained relaxed and big. In consideration of which, I applied Cataplasims powerfully discutient, *ex rad. bryoniae, fol. cicuta, flor. cham. sambuci, sem. fœnugræc. &c.* by which the Swelling lessened,

lessened. He being in hast to go out of Town, I supplied him with Medicaments to dress himself, by which the Tumour was discussed. He hath not been troubled with that watery Swelling since.

A Person having a Swelling in the Left Testicle desired my Opinion of it. The Tumour was soft, and of the bigness of a Goose-egg, without Inflammation or pain, the *Scrotum* it self not much concerned. I supposing it an *Hydrocele*, and within some of the proper Coats of that Testicle, advised him to truss it up close, and in case it grew bigger, I would open it; for at that time there was not half a Pint of Water in it. After a year or more, this Person in Riding bruised the same part against the Pummel of his Saddle; it immediately became painful and hard. He came to *London*, and sent for me. It seemed to me then to be in a capacity of discussion by reason of the access of heat: to which purpose I prescribed this Fomentation: *R. fol. hyoscyami, cicutæ, an. M. ij. fol. malv. bismalv. an. M. j. flor. cham. sambuci, an. M. B. rad. bryon. & lilior. an. ʒiv. sem. lini & fœnugræci an. ʒij.* these to be decocted in *brodio ex capite & pedibus ovinis*, and the *Fæces* made into a Cataplasm, with the addition of *medulla panis tritic. mel romm. & axung. porcine*. By the application of these emollient and resolvent Medicaments the hardness and Swelling were removed and the Testicle reduced to its natural state.

7. Observation of Hydrocele.

One between Forty and Fifty years of Age, of a full Body; came with his Chirurgion to consult me concerning some kind of *Hernia* which of late began in *Scroto*, and was since by accident of Bruise much increased. At sight of the Tumour it appeared to be overspread with an *Ecchymosis*, and I supposed the Humour within it to be an extravasated *Serum*. I advised a discutient and Exsiccant Fomentation and Emplaster, also a Bag-truss. Some little while after, seeing the Extravasation discussed, and the Tumour inconsiderable, I advised the continuance of the Truss. About a Month after we visited the Patient, and saw the Tumour very large and tense, and by holding a lighted Candle on one side it appeared splendent. We concluded it an *Hydrocele*, and proposed the opening of it: but the Patient at that time declined it; and some while after his Chirurgion assured me that it went off of it self, without any manner of Application.

8. Observation of an Hydrocele returned.

Whilst I attended the KING at *St. Johnstone* in *Scotland*, a Man of about Forty Years of Age desired my advice; he having been some years troubled with a Swelling in *Scroto*, which through length of time was grown so big, that he was not capable of following his affairs without much pain. It was soft, and seemed to make a double Tumour. I concluded it an *Hydrocele* distinctly lodged within some *Cystis*, or the proper Tunics of the Testicles, for I could feel neither of them. The *Scrotum* it self was not concerned, otherwise than by its giving way to the Humours within. The Patient desired to be cured: to which purpose I began my work on the right Testicle, it being the most swelled. I applied a Caustick according to the length of the Part on the outside, so as after the discharge of the Water the Opening might fall upon the side of the Testicle, that, in case it should be corrupted by the long lying of the Humour, I might the better apply Medicaments to it. The next day I divided the Escar, and gave vent to a quantity of Water, then to a rotten Matter, with some rags of corrupt Flesh; and at last a bloody *Serum* discharged; upon which this side sunk, but the other remained full as before. I dressed it up with *unguent. basilicon* hot, and applied all over *Empl. è bolo* with Compress and Bag-truss. The Patient was that Night seized with a Colick, and rested ill; and in the Morning, finding him distempered with a Fever, I prescribed him a carminative Clyster, and some Hours after let him Blood. That Evening, taking off the Dressings, I found the Escar dry, and the Parts about it swelled

6. Observation of an Hydrocele with Sarcenata of both Testicles.

swelled and beginning to inflame. I fomented it with *decoct. absinth. flor. cham. sambuci. ros. rub. &c. in vino rubro*, and applied *unguent. basilicon* as before, and a Cataplasm *ex far. bord. fabar. &c.* decocted in Oxymel over the diseased part. In the next Dressings I added *ol. terebinth.* to the aforesaid Unguent, and continued the use of the Fomentation and Cataplasm. By these Applications the Ulcer tended to Digestion, and the Escar separated; but the Swelling continued big. I then applied the Cataplasm mentioned in the former Observation, doubling the quantity of *cicuta*, and dressed the Ulcer with *mundif. Paracels. cum præcipitat.* After a few days I observed in dressing of the Ulcer a rotten Slough to lie within, which I took hold of with my *Forceps*, and feeling it loose pulled it out. It was the corrupt *Cystis*. Upon the coming away of which the Tumour sunk. I dressed it up with Dossils spread with the Mundificative, and upon the Ulcer without applied *unguent. diapompholygos*, as also where the *cicuta* had blistered the *Scrotum*. From this dressing the Ulcer digested well. My endeavour was then to dry up the humidity, and contract that part of the *Scrotum*: which I did by adding *flor. balaustr. nuc. cupress. sumach, &c.* to the former Fomentation of red Wine, and by a Cataplasm of *far. bordei & fabar.* boiled up in some of the said Fomentation: Whilst I was healing the Ulcer within, a hard Swelling arose near the Production, and a *Fungus* thrust out from that Part of the Testicle. Upon search I found that occasioned the hard Swelling; whereupon I laid that part open by a Snip with a pair of Scissors, and covered the *Fungus* with *Præcipitate* and Dossils of Lint; and by the use of that and the Vitriol-stone I consumed it, and cured the Ulcer.

After the Patient had a little recovered his strength, I began with the other by Incision, making it about an inch in length, supposing it would sooner digest, and thereby escape those accidents. It discharged the like Matter as the other did. He suffered also Cholick and Fever, till the corrupt *Cystis* digested out, which was the space of ten or twelve days. After which the Ulcer digested, and by the same method it healed, and the *Scrotum* contracted, so as it was not easie to judge that it had ever been diseased. The Patient is yet alive, and hath never been disturbed in those Parts since.

10. Observation of the same.

A Citizen aged about forty six years laboured of such an *Hydrocele* in both Testicles. I opened and treated them after the same method as in the former Observation hath been said. He was subject to the same Accidents of Colick, Fever, &c. After Digestion the *Cystis* cast forth, as in such like cases is usual, and by the blessing of God I cured him. Doctor *du Molin* saw him dressed once or twice, and prescribed him some Cordial Julep, &c. as he thought fit.

These *Hydrocele's* do not differ in the way of Cure, therefore I forbear a more particular discourse or giving you more Instances of them; but wish you to consider the Age and Habit of Body before you begin this way of Cure; for they are generally subject to Colicks, Fevers, *Singultus*, &c. and, if the native heat be weak they are apt to gangrene.

Hydrocephalus.

Hydrocephalus is a watery Swelling of the Head, having the same Original with other Hydropical Tumours. It is most usually the Disease of Children. The Part affected is (as I said) the Head, either within or without the *Cranium*.

Causes.

The Causes of it are an effusion of the *Serum*, either outwardly between the *Cranium* and the Scalp, or inwardly between it and the Membranes.

Those that happen on the outside are too often the effect of ill handling by Midwives and Nurses, whereby the capillary Vessels are bruised, and the
serous

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ferous part of the Blood extravasated. From this Bruising it is that Corruption often followeth, and the Humour is apt to stink.

The other more internal *Hydrocephalus*, affecting the Parts within, is an effusion of *Serum* within the Skull, either between it and the *Dura mater*, or between that and the *Pia mater*. It is not less frequent to find this *Serum* so extravasated to coagulate into a stiff gelatinous substance all about the Vessels under the *basis* of the Brain, and thence to involve all the Roots and the *Caudex* of the Spinal Marrow, quite over the *Nates* and *Testes* and *Glandula pinealis*, reaching into the Ventricles of the Brain. Many Instances of this kind I could give you in Rickety Children: but these things are not to be discovered till the Patient be dead.

The *Signs* are suitable to the Part affected, and the quality of the Humour. *Signs.* If it lie immediately under the hairy Scalp, and possess it, all the whole Head must be swelled. If the Matter within be oedematous, it will pit under your Finger: if it be a pure *Serum*, it will return to its seat when your Finger is taken off. The Face is pale and swelled, so also are the Eye-lids, sometimes bloody and shining. In the increase of it, it sometimes thrusts out a Tumour like a Wen, but the Fluctuation of it sheweth it to be Water. If it be between the *Cranium* and *Pericranium*, you may feel the *Cranium* bare, and a Fluctuation between it and the *Pericranium*. If it lie between the *Cranium* and *Dura mater*, the Sutures are loose, so that you may often bury your Finger between them. When it lieth under the *Dura mater*, it maketh that swell, and frequently thrusts it self through between some of the Sutures of the Skull; as particularly it did in a young Child, of which anon. What is within the Ventricles of the Brain is not easily discovered whilst the Patient is alive, only it may be guessed at by great Stupidity and Insensibility, if any such thing be.

Doctor *Walter Needham* did tell me of one that in *Bedlam* was observed to sit upright with his back to a Wall without speaking or opening his Eyes for many months, only some odd mimical gestures he used. Upon his death he was opened by order of Doctor *Thomas Allen*, Physician of the place. An oedematous Tumour was found to occupy all the upper part of the *Cerebrum* between it and the *Pia mater*, which descending by the posterior parts of it did possess the entrance into the two Ventricles, the *Glandula pinealis* it self being turned into a Bladder of Water.

But the Story cited out of *Vesalius* by *Sennertus* is yet more wonderful, of a young Girl, that kept her Senses well enough, yet her Head swelled so great as to hold nine pints of Water. The like Observations we find in *Hildanus*, *Kirkringius*, and others, where the Brain hath been so little, and so oddly placed, that the whole hath been judged to be Water. By which we may judge that Stupidity, though, when we find it, it may give us cause of suspicion that such a Tumour is there lodged, yet it is not the necessary concomitant of the Disease.

Children labouring of this Disease are for the most part very unhealthful, *Prognosis.* and in their Infancy subject to Convulsions. If they scape that, they fall into *Rachitis*, which for the most part terminateth in the *King's-Evil*. *stick.*

Those that thrust out from within the Skull are deadly. Those next the *Cranium* are not without great danger. If the Tumour be large, and possess all the Head, the Cure is not without difficulty: but if it possess only some particular external Part, it is more easie.

The Cure of this Disease is much the same with that which hath been delivered in the general Discourse of watery Tumours, viz. by powerful discutient and drying Medicaments; as *summitat. thymi, absinth. majorana, fol. beton. salvia flor.*

flor. sambuci, chamæm. ros. rub. balaust. sumach, bacc. myrtill. nuc. cupress. gland. querc. galla. These may be boiled in Wine, or in a *Lixivium*. And if stronger Medicaments be required, you may add to them *sulph. vivum, alum.* and the various Salts, with which you may foment the Parts. You may also embrocate with such like; *R. ol. laurin. anethi, an. ʒij. ol. de spica, de lateribus, an. ʒj. sulph. vivi, salis com. aluminis usti, an. ʒss. ciner. filiquar. fabar. ʒij. rerebinth. styracis calamitæ, an. ʒj.* Or with the addition of Wax make it into a Cerote. Or, *R. pulver. summitat. absinth. origani, flor. ros. rub. balaust. an. ʒj. salis com. ʒvj. mellis com. q. s. fiat Cataplasma. Empl. de baccis lauri, cephalicum, empl. diasulphuris, de sinapi,* are proper. In order to the applying of these the Hair ought to be shaved. Fontanels are also of use in the Neck and behind the Ears, &c.

If the Humour doth not discuss by the aforementioned Remedies, you may let the Water out by small Apertions, that it may as it were insensibly discharge; and the while continue the use of the milder Discutients and Exsiccants to restore the Scalp to its natural tone. But if, through length of time, the Humour hath united it self into a Tumour of some particular Part, if you be satisfied that it doth not arise from within the Scull, you may cut into it, and let out the Water; or, if it hath a small *basis*, make a Ligature on it, and cut it off. But if you suppose it ariseth from within the Scull, forbear the extirpating it.

1. Obser-
vat. of
Hydroce-
phalus.

A Child of about Four Years of Age was brought to me, supposed to have the *King's Evil*. The Head was extraordinary big, the Face full and pale, the Eye-brows and Eye-lids swell'd. I laid my Hand upon the Head, and feeling it soft, I advised them to purge the Child with *resina jalapii* or *diagridium* and *Calomel.* in the form of a *bolus, cum syr. de spina cervina*, and to make Fontanels in the Neck and behind the Ears, and afterward, if there were occasion, to shave the Head, applying such Medicaments as have been set down in the method of Cure. Sometime after the Parents told me the Child was cured only by the Fontanels behind the Ears.

2. Obser-
vat. of
Hydroce-
phalus.

In a Child of half a Year old, labouring under a watery Swelling of the upper part of the Head between the hairy Scalp and *Pericranium*, I made Issues behind the Ears and in the Neck, and fomented the Head with a Decoction of the milder Discutients and Exsiccants boiled in red Wine. But it being cold weather, they rather desired an Emplaster. In compliance with their desires a cephalick Emplaster was applied. After some time it made such an itching and soreness, as put us upon the necessity of taking it off; which was not done without difficulty, the Scalp being much excoriated underneath. We fomented it again as abovesaid, and applied Cole-wort Leaves on the Parts affected. It healed up in few days, and the Disease was not much lessened: the Issues behind the Ears also healed as the Escars cast off. Having applied several Medicaments unsuccessfully, I made two or three Punctures into the Scalp, and let the Water out, then applied a Cataplasma *ex far. fabar. flor. ros. rub. balaust. nuc. cupress. bacc. myrtill. & summit. hyssop. pulver.* decocted in red Wine. By the use of this and the foresaid Fomentation the Child was cured.

3. Obser-
vat. of
Hydroce-
phalus.

A Gentleman of about Forty Years of Age, having a large Tumour on the *Os lambdoïdes* bigger than a Goose-egg, was commended to me by Sir *Fra. Pr.* I shaved the Hair from about it, brought the *basis* in by a Ligature, and cut it off; then made a cross Stich, taking up the Artery with the same Stich, and brought the Lips as close as conveniently I could; then dressed up the Wound with *pulv. Galeni cum albumine ovi*, and applied an *Emplastr. è bolo* over all, with Compress and Bandage. The Humour was a crude Serum, as in

in *Hydrocele*; only in the bottom of it there were dregs that seemed to be a melicerous Matter. The third Day after, finding the Wound tending to digestion I dressed it with the common Digestive *ex terebinthina*: after Digestion I cut the Stitches, and incarnated and cicatrized it in few Days by the usual Medicaments set down in Wounds of the Head. Many as big I have taken off the same way, and cured accordingly.

Some years since I was fetched to a little Infant not Ten days old that was Born with Two of the above-mentioned Tumours. They were of the shape of Cupping-glasses of the middle size, seated upon the *Suturæ lamboides* and *sagittalis*: they had their Original within the Skull. I felt the Holes they thrust out at; each Hole was round, I suppose of the Compass of an Half-crown, and, as I afterwards found, had their *Cystis* from the *Dura mater*. The Infant seemed to be a dying when I came; it died that night. The next Day I opened it, and found it as I have said. There was also great quantity of Water floating within the *Meninges*, and in the Ventricles of the Brain, and a gelatinous substance all about the Vessels on the upper part, as also under the *basis* of the Brain, &c. as I have before related.

4. Observat. of *Hydrocephalus*.

CHAP. XXIV.

Of Scabs and Itch.

AFTER Waterish Tumours I find Authors frequently treating of the Cause, *Scab* or *Itch*; a Disease which seems to have its Original either from abundance of vicious Salt in the Blood, or possibly from a local Ferment in the Skin.

A Scab caught by Infection seems pretty manifestly to owe its Origin to a local Ferment, there being no other fault in the Body than what lieth in the Skin it self, and converteth the nutritious Juices thither conveyed into the Disease here mentioned. And it's probable that most other Itches do begin in the same place, there being in the Skin a vicious Ferment which makes a Concoction accordingly, and consequently causeth all the other Degenerations that happen. These Degenerations do increase to a farther Infection, if the Blood abound with a salt *Serum*; in which case the Fermentation becometh exorbitant, the Disease groweth more vigorous, spreads farther inward, and infects the whole Mass.

This way, I say, the Itch is very often generated, pressing from without inward: nay, I believe that most commonly it so happens. But I do not deny that it may likewise rise from within, as some of the greater sort of Scabs certainly do.

The *Differences* may be taken from the Cause, and accordingly as it affects the whole Body, or some particular Part, as the Hands, &c.

Differences.

The Disease needs not much Description; it's known by it's nastiness and trouble, and upon that account is more important than it would otherwise be thought.

The Scab or Itch is not esteemed dangerous to life when it proceedeth from an outward Infection. But if it owe its Original to an inward indisposition of the Blood it may prove dangerous; either when it is accidentally stopped by external Applications and Causes, upon which occasion Fevers, Epilepsies

Prognostick.

Epilepsies, Consumptions, and many other like Accidents, have arisen: nay when the Scab hath not been hindered in its untoward progress, the Blood hath notwithstanding been wholly corrupted, and the Patient brought to the grave. Another mischief it hath, viz. Infection, especially if the Scab be moist and full of subtil Humours. Upon all these accounts, both of the Turpitude, Danger, and Infection, it is convenient to propound a Cure.

Cure.

Whether this Disease arise from an outward Infection, or inward indisposition of the Blood, the Cure is much one: only this latter requireth more your Consideration, to take the indication from the Cause, and to make Evacuation accordingly before you apply your external Remedies.

In the first place, a good Diet ought to be prescribed, of Mutton, Veal, Pullet, Chicken, &c. and those rather boiled than roasted. All sharp, salt and spiced meats are forbidden; so are all Fish, Milk, and Herbage, as being corrupters of the Blood. Their drink may be a small Wine diluted with Water, or a well-boiled small Ale, which may also be medicated with Dock-roots, Succory, and Grass-roots, the tops of Agrimony, Pimpernel, Hartstongue, Fumitory. Hop-buds, &c. Or, *R. fol. agrimonie, origani, veronice utriusque, an. M. ss. rad. enule, camp. scorzonera, hirundinariae, an. 3iij. macis, cinnamomi, an. 3j. coq. in cervisia tenuis lbvj. ad dimid.*

The Evacuation ought to begin by Bleeding: and if Blood abound, the Venæsection may be repeated, after the Body hath been somewhat emptied by Purging.

The Purgatives may be Whey and Manna, with *crem. tartar.* or a Decoction of some of the opening roots, with *sena, rhabarb. &c. R. summit. fumarie, M. j. rad. cichorii, polypod. lapathi acut. an. 3j. flor. trium cordial. M. ss. epithymi 3iij. senae 3iij. rhabarb. incisi & in nodulo inclus. 3j. liquiritie 3iij. sem. fenic. dulc. 3iij. coq. in aq. font. ad lbj. colatur. adde syr. ros. cum agarico 3j. ss. manna 3iij. vel q. s. dividatur pro tribus dosibus. Decoct. senae Gereonis, Decoct. epithymi, in the Pharmacopoeia Londinensis, are proper in this Disease.*

If the Body be strong, and the Humours contumacious, you may purge with *pulv. diaturbith, pulv. cornachin. pil. cochiae, de agarico*; or with this: *R. tartari vitriolati, diagridii, an. 3ss. turbith albi gummosi, hermodact. an. 3ij. pulverizentur, & cum oleis caryophyll. & cinnam. an. 3ss. Misc. Dosis à 3ij. ad 3j. Merc. dulc. æthiops mineralis, Bezoard. mineral. ceruss. antimonii, are also of use in the Cure of this Disease. If the season of the year be proper, Barnet or Epsom Waters may be also good. Amongst the common people Brimstone and Milk is a usual Remedy.*

The outward Applications prescribed in the Cure of this Disease are numerous, and may be proportioned to the quality of the person, viz. as he is poor or rich, and the greatness of the Disease.

If it affect but some one part, as the Hands, the Cure may be performed by Fomentations, Unguents, or Cerots: but where the whole Body is infected, there I propose Bathing as most necessary. A Fomentation may be made of such like; *R. rad. enule camp. lapath. an. 3ij. rad. bryoniae 3j. summit. fumarie, abrotani, an. M. ij. flor. ros. rubr. M. j. cort. granat. sumach. an. 3ss. vitrioli albi 3iij. salis petrae 3ij. aluminis, sulph. vivi, an. 3ss. coq. in aq. font. lbiv. colatur pro usu.* After which the diseased Parts may be anointed with some of these following: *R. unguent. rosat. 3iij. balsam. Peruvian. 3ss. arcan. corallin. 3ij. Misc. Or, R. sevi agnini 3iv. ol. amygd. dulc. papaveris, an. 3j. ol. hyoscyami per express. 3j. unguent. tutie Vigonis 3iss. aluminis usti, zinziberis pulv. an. 3ij, olibani 3j. croci 3ij. ceræ alb. q. s. Or, R. unguent. nutrit. 3ij. unguent. popul. 3j. styracis liquidæ 3j. cinnabaris 3iij. Misc. Or, R. unguent. popul. 3j. unguent. rosati 3ij. opii 3ss. Misc. In Chops of the Hands or Fingers, R. unguent. rosati in succo aurantior. lot.*

lot. ℥iij. ceræ alb. 3vj. misceantur super ignem; addatur piperis albi, zinziberis pulv. an. q. s. fiat Ceratum.

Where the Disease hath overspread the whole Body, there (as I have said) Bathing is necessary; and if the season of the year be proper, the River of *Thames* or other Rivers may serve: but in the colder seasons Bathing in warm water is effectual, the party sitting the while on a bag of Wheat-bran. Persons of quality may have sweet Powders, as those of *lign. cassia, Rhodium, calamus aromaticus*, &c. If the Disease require it, they may have such Ingredients boiled in the Bath as have been prescribed in the Fomentation above: they may also have a mixture *cinerum sarment. fraxini, alum. rup. sulphur. virg. &c. cap. pulverizatorum an. p. æq.* It may be quilted in bags, or made into balls with Wheat-bran and Soap, with which they may rub their diseased Bodies.

In the time of the late Civil Wars, our Souldiers in the Western parts of the Kingdom were much annoyed with this Disease, which being gotten amongst them, they infected one another. I commonly let them blood which fell under my care, and advised them to drink for their Mornings Draughts Brimstone and Milk, and to anoint themselves with Brimstone and Butter. But in warm weather frequent bathing in the Rivers was their Cure.

CChange of Diet and manner of living is frequently the Cause of the Itch. <sup>1. Obser-
vat.</sup> So a Youth of about seventeen years of age, newly entertained into a Gentleman's service, raised from a slender mean Diet to a more plentiful fare, brake out with Itch and Scabs all over his Body. Several Ointments were applied; and after all a Quick-silver-Girdle was put on him: but the Disease enraged, and under the Girdle the Skin was heated and excoriated much. I caused the Girdle to be thrown off, and advised the raw parts to be dressed with a mixture of *unguent. nutrit. and populeon*; then caused him to be let blood and purged with a Decoction of *radic. lapath. sena, sem. carthami, &c.* and directed him to bath in warm water for some few days: by which he was cured. Such like Youths so diseased, in the hotter seasons, after Purg- ing and Bleeding, I have commended to bathing in the River of *Thames*, and thereby cured them.

A Girl of about twelve years of age was infected by her Play-fellows at <sup>2. Obser-
vat.</sup> School in the Country, and brake out in mattery Scabs and Itch all over her Body, insomuch as her Shift was frequently bloody with scratching her self. I let her blood, also purged her often with Infusions of *Sena, Rhubarb, &c.* I endeavoured to temperate the Humours by *calomel.* and *æthiops mineralis*, but without success, it itching so intolerably, that, do what we could, she would rub and scratch, so as it no sooner healed in one place, but it brake out in the same or in another. So difficult a work it is to extinguish this Disease where it hath been of any long continuance. The weather growing warmer she bathed in warm water, rubbed her Body with some of the above-mentioned Bags the first three or four Bathings, and in about three weeks space was freed of her Itch, and perfectly cured thereby. The Scars and discolouring of her Skin on her Hands and Arms were removed by anoin- ting them with a mixture of *sacch. Saturni* with *unguent. rosac.*

A Gentleman of about thirty six years of age was infected with the Itch <sup>3. Obser-
vat.</sup> all over his Body. I let him blood and purged him, as hath been set down in the Method of Cure; and having so evacuated the *Plethora*. I prescribed him the taking of *æthiops mineralis*, and sent him some *unguent. popul.* &c. and cured him. By the same means I have cured some others since.

A Gentlewoman of about fifty years of age was very much disturbed by an <sup>4. Obser-
vat.</sup> Itch. After the taking divers Medicaments unsuccessfully she sent to me. I made

made her some Pills of *athiops mineralis*, which she took morning and evening, without any observance of keeping her House; by which she was cured in eight or ten Days, and hath not been troubled with it since, as she her self told me three Years after, which was last Summer.

5 Obser-
vat.

A Person of about Forty Years Old, of a melancholick and scorbutical Habit of Body, was sorely afflicted with the Itch all over her Body. Her Physician at the same time being indisposed could not visit her, but, according to the relation her Servants gave him of her Disease, prescribed her Clysters, and Purged her with such opening Apozemes as were proper in her case, advising Blood to be drawn from the Hæmorrhoidal Veins by Leeches, and afterwards prescribed her a Bath in which she bathed often, but without success. Upon which consideration I was desired by the Physician to give her a Visit, to inform him of her condition. I did so, and saw her hands, Arms, and Breast overspread with brawny Scales, under which were mattery Wheals. She was very hot, and her Tongue parch'd; her Pulse seem'd to be oppress'd. I told her she had a Fever. She replied, it was for want of Sleep occasioned by the intolerable Itch and Soreness. I gave an account of her condition to the Physician, who thereupon prescribed her to be let Blood about Eight or Nine Ounces, and that Night after a Clyster and a cordial Julep; by which she was relieved. About three or four Days after, she complain'd of a pain on her Left Side, and had a Fever with great heat and thirst. The Physician prescribed more Blood to be taken away; which was done to the quantity of Nine Ounces or thereabouts, by which she was relieved of her pain and Fever, and daily recovered strength. And upon farther information of her Recovery, her Physician advised her to remove to *Epsom*, and there to drink the Waters. She did so, and by his Prescriptions was also cured there of her Itch.

6. Obser-
vat.

A Girl of about Four Years of Age was brought to me in a poor Woman's Arms, in the very midst of Winter, the ground being covered with Snow. She was broken out all over the Body with an Itch and mattery Scabs. The Woman desired my Opinion of it, whether I could Cure it. I told her the Cure was difficult; but when the weather should be more seasonable I would readily undertake it. The following Spring I was fetch'd to this Child, saw the Body so diseased as I before represented it, and was perswaded to undertake the Cure. I, considering that they were but few things I could give such a Child, and those required to be well tasted, therefore began with a small Ale medicated with *sarsaparilla*, *lign. lentisc. China*, and some of the Herbs and Roots propos'd in the method of cure for such Drinks. In some of this Ale I mix'd a purging Syrup, by which the Child was frequently purged: then I gave her *Merc. dulc. in conf. ros. damasc.* once in three days, and continued medicated Ale for her ordinary drink, with which they also sometimes made a Posset-drink. By this method the Itch lessened, and the Scabs dried: but by the prosecution of it the Child's Chaps became somewhat sore. I cured the Child and finished my course by bathing it in Milk and Water, and some few Diaphoreticks. The Parents were well pleased with the Cure: but afterwards consulting a Physician (since deceased) in some case concerning their own healths, and discoursing of the Child's Cure, he perswaded them I had effected it with Mercury, and put them upon such a prejudice to the Medicament, as they from that time declined the advising with me, suspecting I might again repeat the use of it.

CHAP. XXV.

Of Lepra, or Elephantiasis.

Lepra and Elephantiasis have so many acceptions in Writers, that it is fit to distinguish them in the first place. I shall therefore understand by *Lepra* the highest degree of the Itch, where the Scabs grow dry, and break out in the form of white Scales, sticking hard to one another, not easily to be pulled off; but if they are, they leave the place red, and soon return again. The *Leprosy* of the *Arabians* was a quite other Disease, which by the *Greeks* is called *Elephantiasis*, and is nothing else but an universal Cancer of the whole Body, black, and indeed a most miserable Disease, but I think scarce known in *England*. The *Arabians* also have an *Elephantiasis* differing from that of the *Greeks*, which is a kind of *Varix*, of which Authors may be consulted.

The Disease I purpose to give you an Instance of is the *Lepra Gracorum*, supposed to be *Celsus* his *Impetigo*, and by others *Psora*, the white Scurf, proceeding from a vicious Salt in the Blood, that doth diminish the *Serum* of it, which when the Skin should separate by a just Transpiration, in stead thereof it converts it into a dry, salt, itching, white Scab, very troublesome to the Patient and difficult of Cure.

The immediate Cause of this Disease is, as I have said, a vicious Salt in the *Serum*. Authors will have it to be generated of a mixture of *Atrabilis*, to be of a more gross matter, and to arise from evil Diet, a dry *Intemperies* of the Skin, a Suppression of the *Hæmorrhoids* or *Menses*, also from a Quartan Fever; and to proceed by the way of Infection, as Scabs do, it being an excess thereof.

It is known by the Description I have given of it, and from thence a Judgment may be given of the difficulty and contumaciousness of Cure. If sick salt Humours abound very much in the body, it proves often incurable.

The Cure of this Disease consists in the prosecution of the same method with that of the Scab; only this as it exceeds that, requires to be treated more strictly, and with Medicaments more powerful. I shall not trouble you with the particularizing them, but refer you to the Observation following.

A Young Woman about 20 Years of Age had been long afflicted with a Species of an *Elephantiasis* upon her left Brow. Many endeavours had been used by prescriptions internal and external, viz. frequent Venæsections, application of Leeches, &c. The Disease increasing, I was consulted, and advised her to purge once in four days with *Merc. dulc.* and *diagrid.* and the intermitting days to take *Bezoard mineral.* and to drink for her ordinary drink *decoct. sarsæ, lign. lentiscin.* with some of the alterative Plants prescribed in the method of Cure. The Part affected we fomented daily with the *Fotus* proposed in the method of Cure: and after the Scabs and Scurf were removed, it was anointed with some of that unguent of *Vigo's*, prescribed in the Cure of *Herpes miliaris*. I began this Cure in Winter, presently after *Christmas*, and cured her before the Spring; yet advised the continuance of the internals, purging her weekly, and when the weather should grow seasonable, bathing in fresh water temperately warm. I saw her half a year after perfectly well.

A Maid of about Thirty Years of Age, having been a long time diseased with an *Impetigo*, or Species of *Elephantiasis Gracorum*, in her Arms, Thighs and Legs, came commended to my care. It began with a *Serpigo*, making many

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round

Description, and Differences.

Prognosis.

Cure.

1. Observation of Elephantiasis.

2. Observation of Elephantiasis.

round spots, such as are generally called *Ring worms*, with extream itching, which by frequent scratching heated and mattered, and afterwards scabb'd, and in progress overspread her Limbs with a dry white Scurf, under which the serpiginous circles lay covered. She had passed through the milder Remedies frequently without success: upon which account I designed Mercurials; and beginning with Vænesection, afterwards purged her with *decoct. epithymi*, as it is prescribed in the method of Cure. After the second Dose I gave her twenty grains of *Calomel.* over night, and purging it off in the morning with the said Apozeme: during which I caused her Limbs to be bathed and rubbed often with the Decoction to that purpose prescribed in the method of Cure, by which the Scurf was moistned and brought off; then it was anointed with one of the foresaid Unguents. After I had thus evacuated the *Plethora*, and disposed her body for Mercurials more operative, I gave her each morning and evening a few grains of *Mercur. diaphoret.* in a *bolus* with *conf. lujulæ* and *Mithridate*, disposing her thereby to a breathing sweat, and caused her Limbs to be daily anointed with *unguent. enulat. cum Mercurio.* These Medicaments proving unsuccessful, and her Chaps not growing sore, I caused her Limbs to be anointed with *Sir Alex. Fras.* his Unction prescribed in *Lues venerea*, and vomited her once in four or five days with *Turbith. mineral.* By this course she emaciated, and her Skin became clean of the *Impetigo*, &c. but she did not salivate, nor indeed were her Chaps very sore. I concluded her course of Physick with Bathing, and sweating with Diaphoreticks, purging her between whiles, for the space of a fortnight, and dismissed her, with advice to drink a Decoction. of *rad. lapath. summit. fumarie dulc. amaræ*, &c. About two months after she shewed her self to me cured and well complexioned, and is well at the Printing of this,

3. Observat.

A Maid of about fourteen years of age, of a fallow Complexion and lean dry Body, having been diseased from her Infancy with a white dry Scab from the crown of her Head to her Feet, her Skin of a Moorish tann'd colour, after taking divers Remedies without success, was at last put into my hands for Cure. I purged her with a draught of the *Decoctum epithymi*, and the day after let her blood about eight ounces or more. She bare it well, and the Blood was of good colour and consistence. The day after I purged her with some of the same Decoction, with the addition of *syr. de pomis purg.* and in the while caused a medicated Ale to be made according to the Prescription hath been set down in the preceding Chapter of the method of Cure, which was her ordinary Drink, and served to make Possets those days she purged. Then I prepared a Bath wherein had been boiled *fol. radic. althææ, lapath. enulæ camp. bryoniæ fol. scabiosæ, majoranæ, fumarie, saponariæ, bacc. laur. juniper. sem. staphisagrie. sem. sinapis alumen, sulph. vitriol. Hungaric.* and a Bag of wheat-bran to sit upon. I prescribed her likewise the mixture afore-mentioned made in a Ball, with common Soap, for her to rub her self with while she sat in the Bath. She had also a Pearl-Julep ready to take upon occasion. After she had thus bathed according to her strength half or three quarters of an hour, she was lapt in a warm Sheet, put into bed, and took a morsel of a cordial *bolus ex theriaca, conf. borrag. lujulæ, Bezoard. occident. ocul. cancr. troch. de viper.* made up *cum syr. è cort. citr. & pom. alterant.* Upon which she swet an hour or more, then dried, and anointed with one of the fore-mentioned Unguents. A waist-coat, &c. was put on, and she arose and was dressed. Her Diet was of good nourishment and easie digestion, such as hath been already proposed. I continued this method of Bathing some while, and purged her every third day with *calomel.* ʒj. at night, and a draught of *decoct. epithymi* next morning. Her head was full of white dry Scabs; for which reason her Hair was clipt close off, and her Head bathed

bathed with a *Lixivium* wherein had been boiled some of the same materials which were prescribed for the Bath, and then anointed with burnt Butter *cum fugiline & sale an. p. æqu.* In the time of Bathing I caused her Head to be rubbed with common Soap, and bathed, to loosen the Scurf and dry Scales. Sometimes during her Bathing I rubbed some of the largest Scales and such as struck firmest with a Caustick-stone, which did not only hasten their fall off, but scoured the Skin notably well. Where the bigger Scabs separated, there remained for the most part an ugly discolouring of the place, and little Excrescences of Flesh, by which those Scabs had been held on so close as if they had been thereby nailed fast. These Excrescences I rubbed off with the Caustick-stone, and where there was occasion I dressed the Parts with *unguent. tutiæ* or *lithargyr.* yet notwithstanding the Disease rose in one part as it dried in others. Upon which consideration I vomited her with a few grains of *turbith mineral.* and repeating it twice or thrice, intermitting a day or two between, her Chaps swelled. Upon which I forbore the use of the Bath, and kept her warm, then salivated her seventeen or eighteen days: in which time the Scurf fell off quite, and her Skin became clean. I then Purged her with Sir *Alex. Fras.* his *Potus amarus*, and put her into a *decoct. sarsæ, Chinæ, &c.* with some of the hepatick Plants; I sweat her for some days with Diaphoreticks, Purging her once in three or four Days; then bathed her in warm water, washing her Body with Balls of Wheat-bran and Soap for some few days. Thus we concluded the course, she being to all appearance perfectly well, and her Complexion fresh. She should then have returned into the Country, but that I desired she might stay the Spring of the year for a farther trial of her Cure, it being then *February.* She did stay, and in *April* the Disease began to appear in her right Arm, and rise scattering about her Body; which encreasing, I let her Blood again, purged her with Whey and Manna, and bathed her in warm water, wherein I put a Solution of Sublimate, designing that way to flux her. But it not rising to my mind, I anointed her Legs and Arms with Sir *Alex. Fras.* his *unguent. Neapolit.* by which I salivated her near thirty days; in which time the Scabs fell off again. As the Salivation declined, I put her into a *decoct. sarsæ* as formerly, sweat her and purged her, and having finisht the course with Bathing as I had done before, delivered her once more cured. Her Friends, seeing her thus recovered, put her to School, to give her that Breeding which her diseased Body had hindered her so long from. Since that she is married, and, as I have been lately informed, continues well: yet is not so freed of that Disease, but that she hath sometimes little Remarques of it.

CHAP. XXVI.

Of Gutta Rosacea.

THE Face is also subject to these irksom Diseases, which have been anciently distinguished by the names of *Impetigo* or *Lichen*, *Menagra*, and *Gutta Rosacea*. The former of which raged in *Italy*, and was taken notice of by *Pliny* in his days as a malign Disease; but it is not known in our times, unless it be in the *Lues Venerea*, where are sometimes found all the Species of *Impetigo* and *Pustulæ* that ever were mentioned by any of the Ancients. But in this place I shall only take notice of the *Gutta Rosacea*, a Disease which when heightened by acrimony, is not inferior to the most malicious of other Diseases, and as difficult of Cure.

Descripti-
on.

Gutta Rosacea ariseth in little hard Tubercles like so many *Hordeola*, affecting the Brows and Face all over with great itching, which being scratcht look red, and rise in great Welks, rendring the Visage fiery, and in progress of time made those totting *Copper-noses*, as we generally expresse them.

Cause.

The immediate Cause is a gross hot Blood affecting the Face with such a flushing heat as is commonly seen in Blushing, and by reason of its gross consistence can neither return back, nor suddenly discuss, but remaineth in the Part, and after some time riseth in red Pimples, which so vitiate the tone of the Fibres, that though the Patient do get afterwards a better Habit of Body, yet doth he for the most part suffer under the Disease. Ill Diet is a Cause, hot Spices, Onions, Garlick, and the like; so are strong Wines: yet it's thought more commonly to befall those that drink strong Beer. A suppression of the *Menses* or *Hæmorrhoids* is often a Cause of this Disease.

Signs.

The Signs of the Disease are, a flushing heat, with red Pimples and Tubercles, which in progress of time become blewish, and of a more dark red colour.

Prognostick.

The *Gutta Rosacea* is difficult of Cure in its recency: and if it be of long continuance, the Tubercles grow big, and Excrescences arise out of them, and they accompany the Patients to their graves.

Cure.

The Cure is begun with regulation of Diet, removing of the Obstructions in the *Viscera*, and temperating of the evil quality of the Blood. The Diet ought to be of good nourishment and of easie Digestion, as hath been above said. The Evacuation consists in Bleeding, and Purging with opening Apozemes: as *R. fol. cichor. acetosæ, an. M. j. senæ ʒiij. tamarind. ʒss. flor. trium cordial. an. P. j. liquiritiæ ʒij. sem. fœnic. dulc. ʒj. coq. ad ʒiv. in colat. dissolv. Rhei in aq. cich. infus. ʒj. syr. ros. solut. ʒiss. aq. cinnam. cochl. j. Misc.* Or, *R. rad. oxylapath. acetosæ, cichor. gramin. an. ʒj. fol. endiviæ, fumariæ, dent. leon. capill. Vin. an. M. j. sem. quat. frig. maj. an. ʒiij. liquiritiæ ʒss. senæ ʒij. tamarind. ʒj. galang. ʒij. santal. citr. ʒj. coq. ad ʒij. colat adde expressionem ʒss. rhab. in prædict. decoct. syr. de pomis purg. & diasereos an. q. s. fiat Apozem.* With which you may purge your Patient. After which Chalybeats may be of use, &c.

In the use of externals, if the Disease be recent, only with a flushing heat in the Skin with some small Pimples, a *decoct. malvæ, bismalvæ, viol. sem. verbasci, psyllii*, or the like, may give a breathing to the Humour; and a Posset made with Juice of Limons or the like, may restore the Face to its former good Complexion. but if the Disease be of longer standing, and the Tubercles many and hard, you must then bath them with more powerful Emollients: as *rad. figil. Solomon. cucumer. agrest. rad. lilior. sem. lini, fœnug. &c.* and *cerat. dialthææ* may be afterwards applied on them, and such Medicaments as may dispose them to Suppuration: then they may be opened with a Lancet, and the Matter discharged. You shall afterward deterge and cicatrize them with as small a Scar as may be, and smooth the Skin with such like; *R. camphoræ ʒj. ol. amygd. dulc. ʒiij. mix them in a mortar, then add ol. Tartari per deliquium ʒij. vitell. ovor. num. ij. sacch Saturni ʒss. aq. flor. fabar. figill. Solomon. & aq. ros. an. ʒiij.* Or a *lac virginis* thus made; *R. lythargyr. aur. ʒiij. aceti optimi ʒij. coq. ad dimidium, & colatur. adde salis com. in aq. font. soluti ʒiv. aq. ros. ʒvj. sal. armoniac. ʒj. Misceantur omnia simul pro usu.*

Observat.

A Gentleman of about forty years old was very much vexed with a flushing heat all over his Face, with some red Pimples not considerable. Many Medicaments he applied, but in progress of time they terminated in Tubercles, some whereof were round, others of an oval figure; some were hard

hard, others soft. They all itcht extreemly, and put him upon a pinching of them, upon which they grew the bigger. One of them he opened with a Pen-knife, and gave vent to a viscous white Matter, but the Tubercle fill'd again. Upon which consideration he advised with me, and desired my help. I caused a Fomentation to be made of some of the Emollients above-mentioned, and to the *Fæces* beaten and pulped I added *axung. gallin. anatis, ol. ex ped. bovinis*, and with a little *terebinthina* and wax made a Cerote, which after the use of the Fomentation was daily applied. In the while he was purged, as hath been above proposed, and let blood, and afterwards drank *Epsom Waters*. By this Method much of the Matter was evacuated, the heat contempered, and the Tubercles in part breathed forth. Those that suppurated I opened, and discharged the Matter: and those that would neither suppurate nor discuss, I cut into, and permitted them to bleed. By the continuance of Emollients they resolved, and in the space of six weeks he was in a manner freed of these Hillocks, and his Countenance became smooth and clear.

Some others I have cured by the same Method, and of the female Sex, where it was more discernable. I shall forbear the instancing them, because it was a work of time, and performed after the same method.

C H A P. XXVII.

Of Flatuous Tumours.

WE have already treated of Tumours coming from *Humours*, which was our first general Head: we shall now say somewhat of those that owe their Origin to *Wind*, called by the *Latins*, *Inflationes*, by the *Greeks*, *Emphysemata*.

They are by Authors usually ranked next to *Oedema*, as partaking much of the nature of those Tumours, having generally a watery Phlegm joyned with them.

Emphysema is a light puffy Tumour easily yielding to the pressure of your fingers, and ariseth again in the instant you take them off. It is of an uncertain bigness, some times very large, other times small without any weight to the Part that contains it. Definition.

As to the *Differences*, they are either pure or mixed. A pure *Emphysema* Differences. is found rarely, unless it be in cases of Wounds in the Breast, where the air getting in between the Muscles and Membranes doth puff them up like to the inside of a Shoulder of Veal. Most usually they are mixed with Humour, which is always Phlegmatick. They differ also as to their place, some being inward, others outward. The inward belong to the Physicians. Outwardly we find them upon the Eye-lids, on the great Joints, and in other membranaceous Parts. The Belly is very subject to them, both in the *Scrotum* and Navel, which are the usual seats of the *Hernia ventosa*; and indeed in other parts of it wheresoever of the Guts, &c. The *Peritonæum* is relaxed. In which places we do first find a soft windy Tumour, and at length, if it be not prevented, an Extruberance of the Gut it self.

The Cause of the pure *Emphysema* is evident, viz. the ingress of air. But that of the mixed ones is not so easie to be assigned. And possibly he that reads what the learnedest Authors have said on this Subject will depart unsatisfied.

In

In the inward Parts, as in the Ventricle and Guts, we find manifest acidities, which meeting some fermentacious Matter do huff and puff, and, being contained within the bounds of these Cavities do blow them up into a Tumour, which is usually dissolved by Evacuation upward and downward; which notwithstanding doth not prevent the successions of new Inflation, unless the fermenting principle be destroyed.

In the outward Parts, as the Knees, &c. we do imagine some proportionable degeneration of the local Ferment, which doth make the like Ebullition with the extravasated Humour. The Vapour so generated being confined within the Skin, so as not to be suffered to pass out, and remains there in a windy or flatuous Swelling.

Signs.

Those Tumours are without alteration of colour in the Skin, or pain, unless they lie deep amongst the sensible Parts near the *Periosteum*. One Sign is given us of them, viz. the sudden increase and diminution. The Ancients distinguish an *Ephysema* from other Tumours by the Sound it giveth when struck upon. But that Sign I have not met with, no not in the *Tympanites*. Indeed a crackling is often felt, if the Tumour be in the Knee or other outward Part; and in the Belly Wind is heard to rumble: but what concerneth inward Diseases is not within compass of my Discourse.

Prognostick.

Flatuous Tumours affecting the great Joints are of most difficult Cure and not to be opened without mature consideration. All Tumours of this nature are more easily cured in Summer than Winter. But those off from the Joints may be opened at any time, and are of easie Cure.

Cure.

In the Cure of those Tumours you may proceed by Internals as hath been shewed in *Oedema*, the Causes differing but little, both being from a Phlegmatick constitution of the Blood. Phlebotomy may be admitted, if Blood; but generally the Puitous Humours are here in fault, and they are to be prepared and purged as aforesaid.

The external Applications ought to be such as may by their heating and attenuating quality discuss the Flatulencies. Such are *summitates majoranæ, abrotani, hyssopi, organi, ruta, rorismarin. bacc. lauri, juniperi, sem. anisi, fœniculi, carui, cymini, &c.* Of which Fomentations may be made in Lixivies or Wine. *Sacculi* likewise may be made *ex sem. milii, cymini, & sale*. Embrocations may also be as followeth. *R. ol. rutacei, sambucini, chamæmeli, anethi, an. ʒj. ol. majoranæ, carui, an. ʒj. Misc. ol. sulphuris, terebinth. bals. sulphuris Rulandi, Empl. de baccis lauri, è cymino.* Or, *R. fœcis ceræ nova lb̄ss. micæ panis surfuracei lb̄ss. flor. ros. rub. ʒj. coquantur in vino albo; deinde contunde, & adde piperis, caryophyl. nucis myristicæ, zinziberis an. ʒijlb̄ss. sem. cymini, anisi, fœnic. ammeos, an ʒlb̄ss. ol. chamæmeli, anethi, rutæ, an, ʒij. Misc. S. A. & fiat Cataplasma.* Scarification, Blistering and Cupping are also commended. If by none of these it yield to Discussion, but inflame and grow painful, treat it with Anodynes; of which *cerat. œsypi* and *lana succida* hath the preeminence. But if the Tumour be in such place where it may be safely opened, the speediest way of Cure is by cutting into it. Some Writers have advised the binding of the Part above and below, and opening the Tumour between. If you think there be reason for it do so; but there is no fear of its flying away from the vent you shall give it. The Cure of the Abscesses is afterwards effected as in other crude Abscesses hath been shewed.

In penetrating Wounds of the *Thorax*, and where the external Orifice is small, there Flatulent Tumours may be frequently seen greatly blowing up that and the adjacent Parts. The Cure is performed by enlarging the external Orifice in the Skin. You may see an Observation of it amongst those of the Breast in the Treatise of Wounds.

Of

Of the many that have come to me supposed to have the *King's-Evil*, there were not a few diseased with crude Tumours of other kinds. Some of those which seemed most like Flatulent Tumours I opened, but they proved all to be phlegmatick and waterish Tumours. Those in the very Knees which are so generally esteemed flatulent, I opened by puncture with a Lancet, some to the very Bone: in the most prominent parts there issued forth only a few drops of ferous Blood, and that without any diminution of the Swelling. In some of those in which I made the Puncture less deep I passed in a Probe, where feeling a Tumour under the *Periosteum*, I penetrated it with my Lancet, and discharged an *Ichor* in small quantity: the Bone was there carious. Upon which consideration I am apt to think that all these painful Swellings in the Knees (which are not strumous) do arise from an over-moisture of the Membranes and Ligaments, which in progress of time doth corrupt the Bone underneath, so that they apostemate and terminate in carious Ulcers. Those which are less painful are generally superficial, proceeding as I suppose, from an over-moisture of the *Membrana carnosa* and Parts above it. It being so, our best endeavours ought to be in the applying moderate attenuating and exsiccant Remedies with good Bandage.

A Young Gentleman of about eighteen years of age was commended to my care by Doctor *Denton*. He had a round soft Tumour upon the fore-part of his right Thigh, without Inflammation or Pulsation. I applied a Caustick upon it, and the next day divided the Escar: there came nothing of Matter forth. I thrust my Knife deeper into it: there followed only a few drops of Blood, but the Tumour sunk. I dressed up the Escar with *unguent. basilicon*. to digest off the Slough. During the separation of it there appeared no more Matter than might reasonably be expected from such an Escar. After separation thereof the Ulcer incarnated and cicatrized in few days. This we judged a flatulent Tumour, yet it was not discovered by its Noise or Sound.

A Citizen's wife aged about thirty six years, of an ill Habit of Body, had amongst other Diseases, a soft white Swelling a little above her Knee on the outside of her right Thigh. Many Applications having been ineffectually applied, Doctor *Walter Needham* and my self were consulted. We concluded it a Flatulent Tumour, and proposed the opening of it: to which purpose she was purged. Her Body being so prepared, I applied a Caustick on the most prominent part, and the next day divided the Escar, and passed my Knife deep into it: there came out nothing of Matter or Blood. I made a search with a Probe, and passed it almost to the Bone, meeting no other opposition by the way than a soft puffy membranous Flesh, such as is usually seen in a Shoulder of Veal. I dressed it with Lenients, Emplasters and Bandage.

The fourth day, the Physician being present, I took off the Dressings; on which there appeared little more Matter than what is usual from such Escars. The Tumour continued, and was somewhat inflamed it required Digestion. To which purpose I sprinkled in about ʒj. of *Merc. præcipitat.* and dressed it up with Lenients as before. The third day after I dressed it again, and saw the Escar separating, and the Abscess digested. I dressed the Abscess again with *Præcipitate*, and the external parts with *unguent. tutiæ*. By this method the Abscess digested, and the Tumour sunk, and was cured as hath been above shewed. Many of these Tumours we meet with which are certainly raised by a *Flatus*, yet give no Sound, nor yet doth there appear any Wind to puff out upon opening.

In the time of the Wars a Souldier was brought to me much wounded. During his Cure we took notice of a large white Swelling on the outside of

one of his Thighs, which we supposed Matter: and after the Digestion of his Wounds I opened that Tumour. There issued out only a little waterish Humour, part whereof was tinged with the Blood dropping from the incised Lips. There was neither crackling of Wind or hollow Sound, yet the Tumour sunk from that Dressing; and by Discutients and Exsiccants with good Bandage it was soon cured. Some other such like Tumours I have met with, and cured accordingly.

4. Obser-
vat.

A Gentlewoman of about Thirty Years of Age had a Swelling on her right Knee encompassing the *Rotula*: it had been growing about a year or two. I supposed it flatulent, and treated it as hath been set down in the method of Cure, by Fomentations, Embrocations and Emplasters: but it heating thereby and encreasing, I applied an *Empl. è bolo*, and caused a Knee-piece to be laced on: by the continuing use of which the Swelling was restrained, and the Knee recovered its former strength.

5. Obser-
vat.

Another about Forty Years of Age, of a full Body, had a round soft Swelling, lying on each side of the *Rotula* without alteration of colour in the Skin, it had some time disabled her from going up or down a pair Stairs, and often hazarded her falling in other motions. In this case I applied an Emplaster *ad herniam*, with an addition of *cerat hyssopi* over each Tumour, and a Compress of brown Paper soaked in *aqua fabrorum*, over which a laced Knee-piece was put on, and streightned proportionably. By the renewing these Dressings once in a week or ten days the Swelling discussed, and her Knee recovered its former strength: yet she continued the wearing of the Bandage some years.

6. Obser-
vat.

A young Person having been some years afflicted with a Swelling in one of her Knees, after various Applications it encreasing, I was sent for, and saw it overspreading the Joint and parts about, retaining the natural colour of the Skin. It yielded to the impression of my Fingers as a Bladder half blown up; by which I judged it flatulent. The Bone on the inside of the Knee was also protuberant, which at their first discovery of the Tumour gave the Parents a suspicion it was luxated. I began with a Fomentation made of a Decoction of some of those Plants proposed in the method of Cure, and embrocated it with *unguent. nervinam*, and with Wax made up a Cerote of the same, which I applied with good Bandage till I got a Knee-piece made. Being made, I laced it on, and from that time repeated the Dressings once in a week or ten days. By this method the pain and Swelling diminished, and she walked on it with more strength. Indeed the Cure of these chiefly depends on the well-lacing of them; for accordingly as it was streightned, so the Swelling lessened. The weather growing seasonable, she went to the *Spa*, and afterwards to the *Bath*: from whence returning no better, she was again recommended to my care. I then attempted the discussing it by Medicaments more powerful: they heated the Tumour, and blistered it here and there, but did not lessen it. After I had asswaged the heat by Lenients, and healed the Excoriations, I applied over the Tumour *Empl. diaphysulphuris Rulandii*, laced on the Knee-piece again, and renewed the Application once in ten days. In their over-hard lacing of this Bandage the Leg swelled: to prevent which, I caused a laced Stocking to be put on it. By the wearing thereof the Knee-piece was laced with more advantage, and she recovered strength of it daily, to walk, dance, and visit her Friends abroad. During this, Doctor *Micklethwait* being in the House visited my Patient, prescribed such Internals as were proper for her, and proposed the embrocating of the Tumour *cum oleo sulph. terebinth.* which was used daily for some time. Afterwards a Pultice was advised of the tops of green Wormwood, Rue, Sage and Feverfew, with Hogs

Hogs-grease : this was applied till it became offensive to her. After these several Applications, it appearing to them more visibly that her Cure consisted in the well-lacing of her Knee-piece, there was taken more care therein by her Servants, and a warm Cerote applied under it. The Tumour lessened, and is since very much diminished. I have lately taken of the Plaister and Laced-stockin, and hope in few weeks she may leave off the Knee-piece, the Swelling being now inconsiderable.

A young Gentlewoman came to *London* with a puffy Swelling on her left Foot near her Toes ; part of the Swelling stretched over the Toe next the Little one, on which the Tumour was near two fingers breadth. It was without Inflammation or considerable Pain. I supposed it to be Wind, and would have given vent to it ; but, not being permitted, I endeavoured then by Discutients to scatter it : it inflamed, and would not yield thereto. I then applied *Emplastr. à bolo*, and put on a Laced-Sock with a Bracer tacked to it for that Toe, and by Compress and careful Lacing suppressed the Swelling, and gave her so much ease, that after some time it hindered her not from taking those Divertisements others her School-fellows did. After she had worn this Sock some months, she left of the use of Emplaisters, but continued the Bandage some years. The Swelling on her Foot is since discussed, but the Toe continues still big, yet inconsiderably to what it was.

CH A P. XXVIII.

Of Hernia.

HAVING thus far treated of Tumours by *Humour* and *Wind* ; it remaineth now that I say somewhat of a Tumour made by the *interposition of a solid Body*. Examples of this nature are frequently to be found in some sorts of *Hernia*, viz. the *Zirbalis* and *Intestinalis*, the falling out of the Kell or Guts ; which, being both of them solid Bodies, are often interposed preternaturally between several Coats of the *Peritonæum*, *Scrotum*, or other adjacent places, and do denominate the Tumour an *HERNIA* of that Part where it is raised.

If it burst out at or near the Navel, extending there the *Peritonæum*, together with the several Tendons of the oblique and transverse Muscles of the *Abdomen*, it is called *Exomphalos*. If either of these break down into the Cod, that Tumour is most strictly call'd a *Hernia*. And though only these which I have here mention'd be strictly that Disease, yet other Tumours of those Parts, for their likeness to these, obtain the same name : viz. the *Hernia aquosa*, which is an Hydropical Tumour ; the *Hernia carnosa*, which is a *Sarcoma*, or sometimes *Scirrhus*, of that Part ; the *Hernia ventosa*, which also belongs to another Head, as also doth *varicosa* : of the former notwithstanding of these two I do add something in this place, by reason of the affinity of the Cure.

I shall first begin with the *Hernia Scroti*, *intestinalis* and *zirbalis* : both which are manifestly the falling down of the Gut or Kell, either quite into the *Scrotum*, which is a perfect *Rupture* ; or else part of the way only, which is usually termed a *Relaxation*.

That this Disease may be thoroughly understood, it will be necessary to give you an exact Account of the Parts concerned. The principal is the *Peritonæum*, or strong Membrane that lines all the inside of the Abdominal Muscles, and then passing to the Back, doth there some-way or other involve and give

Coats to all the *Viscera*. It is a strong Membrane, every-where double ; in the duplications of which all the *Viscera* of the *Abdomen* are hid, and through which all the Vessels do pass. Its thickness and thinness is very different in several Parts, according to the several necessities of Nature. The lower part of it is strongest, to enable the Belly the better to bear the weight of the Intestines ; and is usually presumed, by inadvertent Men, to be perforated in the Navel, for passing of the Umbilical Vessels ; and in the Groin, for the transmission of the Seminals. But he that will consider the case will find it otherwise. For the Membrane, being every-where double, doth so receive these Vessels between its Coats, as that they passing behind the first Coat leave it every-where entire, both at the Navel and *Inguen*. But in the latter place, the Seminals do take the outward *Lamina* of the *Peritonæum* along with them, which, containing them in it self, doth at length make that Tunicle which involveth the Testicle, by the name of *Tunica vaginalis* or *Elytrôides*.

This, I say, is the most natural structure of the *Peritonæum*, in which if the inward *Lamina* be strong, it keeps within the hollow of the Belly the Guts and Humours, if there ; so that though the Cavity be full of Water, yet it transmits nothing into the *Scrotum* ; and the Tumours that happen to the *Scrotum* of Hydropical Persons are usually anasarcaous, coming outwardly into the Membranes of the *Scrotum*, not passing from one Cavity to the other.

But if this inward *Lamina*, either through its own weakness, or the force put upon it in straining, &c. do relax, the Entrails thrust forward to the *Scrotum*, and in the top of the Process (usually so called) suffer an Angle to be excavated wherein part of the Guts is contained, and the Membrane extended, but not broken. In which case, the membranous partition that intercedes between the Guts and the *Scrotum* is visible. But if the Membrane break, then the Entrails rush down without controul into the *Scrotum*.

In Women also Ruptures are apt to happen in the Groin in the same place, by reason of the transition of the *Ligamenta uteri teretia*, which pass between the *Laminae* of the *Peritonæum* after the same manner as the Seminal Vessels do in Men. These Tumours usually end in the Groin, and are known by the name of *Bubonocèle*, which is a common name to all the *Herniæ* in that place, whether they be in Men or Women.

Causes. The *Causes* of *Hernia intestinalis* and *zibalis* are divers. In Children it proceeds from abundance of Crudity or Moisture, vehement Crying, and holding their Breath too forcibly. In those of more Age, from violent Exercise, hard Riding, Jumping, Vaulting, Hallowing, carrying great Burthens, a Blow or Fall, or any thing that may over-stretch the *Peritonæum*. The very weight of the Bowels and Kell in Fat People is often the occasion of a Rupture. In such Bodies Vomiting may be a Cause ; yea, the very straining upon the Close-stool (if they be costive) is enough to make a Relaxation in some part, and a Rupture frequently followeth.

In Women, Hard-labour in Child-bed hath often been the Cause of a Rupture in the Groin, as also in the Navel.

Signs. The *Sign* of a *Hernia* by Relaxation, is, a certain Eminence or soft Tumour appearing under the Skin in either of the Groins, or other part of the Belly, without Inflammation or Pain, which disappeareth after the Patient hath lain some time on his back in bed, and appeareth again when he is up : and by laying your hand then upon it, if he cough or sneeze, you will feel the impulse of the Bowels, which is not to be felt on the sound Part. According as this Swelling is greater or less, so it is more or less accompanied with an uneasiness or Colick. In Infants this Disease is scarce taken notice of by their Nurses,

Nurses, till it hath made its way into or near the *Scrotum*, to which place these through neglect do fall.

The Sign of a *Hernia intestinalis* made by Eruption, is, the sudden rise of the Tumour, whether it be made by Blow, Fall, or the like; in which case the Intestines or *Omentum*, or both, slide down into the *Scrotum*, or lie in a great Tumour in *Inguine*. If it were caused by a Blow or Fall, there is sometimes Blood extravasated, and the Swelling is painful, whether it be in *Inguine* or *Scroto*; and it soon descendeth from the *Inguen* to the *Scrotum*, where you may distinguish it from a *Sarcoma* by laying your hand upon the Production of the *Peritonæum* just at its exit from the *Abdomen*, then putting the Patient upon coughing or sneezing: upon either of these you will perceive the motion of the Gut, if it be there. If this *Hernia* be neglected in the Female Sex, it will make a round Tumour near the *Pudenda*.

The *Hernia omentalis* is an unequal soft slippery Tumour, of a continued bigness, whether the Patient be full or empty: whereas that of the Intestine is round, and hath a certain murmuring, if it be empty; and if it be full of Excrements, they may be felt in it. The Tumour is also greater or less, according as the Patient is full or empty: a painful Colick attends it; and if it be not timely reduced, a Fever and Vomiting followeth.

The *Hernia umbilicalis* is discerned by the Prominence in the Navel. Whether it be of the *Omentum* or Intestines, may be judged by what I have already said of the other.

The *Pneumatocèle* or *Hernia ventosa*, affecting the Belly in divers parts, is distinguish'd by its quick growth and roundness. Infants are frequently subject to it, sometimes in one Groin and Testicle, and other times in both. It lodgeth between the Testicle and *Tunica vaginalis*, making a Tumour like the Bladders which are found in some Fish: it is long or round, according as it possesseth only the cavity of the Testicle, or that and the whole Production.

No *Hernia intestinalis* is without danger: those made by Relaxation are ^{Prognosis} least dangerous. Those by Rupture in Children and Youth under twenty ^{sick} years of age, or while they are growing, are curable* if they be timely reduced, though the Intestine be fallen down into the *Scrotum*: but in People of full growth they are for the most part capable only of being kept up by good Bandage. If the Intestine be not speedily reduced, there followeth grievous Pain, with Colick and Fever, because the excretion of Excrements is prohibited; from whence Inflammation, vomiting of Excrements, yea, sometimes Gangrene and Death, ensue. But if the Rupture in the *Peritonæum* be very large, the Intestines frequently perform their office as safely in the *Scrotum*, as if they were in their natural place within the *Abdomen*.

The *Hernia umbilicalis* is subject to the like Accidents as that of the *Scrotum*, if not timely reduced.

In other cases the Skin is sometimes worn so thin that it breaks, and the Cure is most difficult, by reason of continual pressure of the Bowels.

The *Hernia omentalis* is not dangerous, yet by reason of its softness and slipperiness it is difficultly reduced and retained within after it is reduced; but in Children it is of easie Cure: and those People who are of a sanguine and humid Temper are of more hopes of Cure than those of a dry Habit. Yet if the Tumour be small and recent, and only in *Inguine*, the Cure is feasible, be the Habit of Body what it will.

Hernia arising from Wind is of more easie Cure, especially in Children, whom it generally afflicts.

In order to the Cure, you are to consider the *Hernia*, whether it be *intestinalis* or *omentalis*, recent or of long continuance, made by Relaxation or Rupture.

You are, in the first place, to endeavour the reduction of it; to which purpose, you ought to advise the Patient to lie upon his Back, with his Head declining, and his Hips raised high, with his Heels retracted towards his Hips. Then with warm Cloths you are to try how you can reduce it, pressing moderately and gradually, taking care that you do not bruise it or the Testicle. If it yields not to such endeavours, you are then to consider whether the repletion of Excrements or Crudity were the Cause; in which cases you may prescribe a Clyster: *R. rad. & sol. althææ, sol. malvæ, viol. betæ, parietariæ, an. M. j. flor. cham. meliot. sambuci, an. M. B. sem. lini, fœnugræc. an. 3vj. sem. anisi, fœnicul. an. 3j. coq. ad tertias; colat. sume 3vij. in quibus dissolv. sacchar. rubr. 3ij. mellis rosat. colati, diacathol. an. 3j. hieræ picræ 3vj. ol. cham. lilior. an. 3ij. salis com. 3ij. fiat Enema.* Or else Clysters of fat Broth with a little Salt. These may be repeated till you have emptied the Bowels, and the while the remaining Decoction may be applied hot with Stupes: and if the Excrements be hardened in the prolapsed Intestines, you may make a Cataplasm of the *Faces*, by beating them up with *axung. porcin. unguent. dialthææ, ol. lilior. &c.* and apply it hot to the *Scrotum*. Thus the Excrements may be softened and evacuated. If Flatulency be the cause of its not reducing, foment and embrocate with such Discutients as have been proposed in *Flatulent Tumours*, (if what is prescribed be not sufficient) then reduce the *Hernia*: which being done, your next work will be to shut up the *Foramen* by which the *Omentum* and Intestines passed forth; and that we shall propose with Medicaments that have a binding and agglutinative quality: such are *Emplastr. contra rupturam* in the *London Pharmacopœia*, and *Emplastr. de pelle arietin.* Or, *R. mastich. thuris, aloes, sang. dracon. sarcocollæ, bol. armen. gypsi, gallar. an. 3ij. ichthyocollæ & taurocollæ in aceto dissolut. an. 3ij. malaxentur, & fiat Emplastr.* Spread some one of these upon Leather, and apply it with some convenient Truss; of which some are made of Dimity or coarse Holland, others of Whale-bone, Steel, &c. Those made of Dimity have Boulsters stufft with Cotton for one or both Groins, with two Straps to come betwixt the Legs, and fastned behind or to the Boulsters by Clasps or Points. Those that are designed for the *Bubonocèle* have a couple of Straps tack'd to the end of the Boulster, and, passing betwixt, are fastned with Points behind. These Trusses are proper for Infants and tender Bodies, where the Rupture is recent, and for the most part made by Relaxation. They are necessary in the Cure of Ruptures in People of Years, and have always served my purpose in the Cure of Children. There is great care required in the putting them on and wearing them. In Children it is the work of Nurses or Maid-servants, who frequently tie them too slack about the Loins, and too streight betwixt the Legs; by which negligence they bring the Truss over the Buttock, or else permit the Rupture to slide down under the Boulster into the *Scrotum*: all which Enbours, though they be forewarned, yet they do often commit, and thereby the Cure is delayed, and imputed to the ignorance or neglect of the Chirurgeon. To avoid which, we are sometimes necessitated to put them on Straps over the Shoulders, such as Labourers commonly wear to keep up their Breeches. Nor indeed are Children only Sufferers in this case; for People of full age, by reason of carelessness in putting on and wearing their Trusses, permit small *Herniæ* by Relaxation in *Bubonocèle* to encrease and slide down in *Scrotum*. To prevent which in Men, I commonly order a Bag-truss to be fastned near the Boulster, by which the *Scrotum* is tucked up, and rendred the less capable of receiving the prolapsed *Omentum* or Intestine. In Women, through ignorance and shyness in consulting, small *Herniæ* in *Inguine* do also encrease to a great bulk: in which case a hollow Boulster-truss may be fitted proportionably to the Rupture; or a Bag-truss, to retain it up. In Men, through the often descent

of the Bowels, the Eruption is made sometimes so large, that the Intestines do their office in the *Scrotum* with as little disturbance as if they were in the Belly: in which case a Bag-truss is to be proportion'd, with a hole for the *Penis* to pass through; which being put on whilst the Patient is in bed, and in a declining posture, will much hinder the prolapse of the Bowels, and ease the Patient much in his going abroad about his affairs; and by the continuance of the Chirurgeon, and his endeavours, the Rupture may be restored to a good condition. These sorts of Trusses are well made by Mr. Syms in Bell-Alley near Temple-Bar.

There are other sorts of Trusses made of Whale-bone; the stuffing of the Bolster is placed upon Cork, which will sit firm upon Children and Youth. There are others made of thin *Laminae* of Tin and Steel, with and without Joints, which do sit easily about the Loins: they have also Boulsters, that, by virtue of Worms and Screws fixed in them, do sit closer or more distant, and retain the Rupture up without pressing upon the Spermatick Vessels or *Os pubis*. They are useful in old *Hernia*. These are made by Mr. Smith, a Scotchman, who lives near Fleet-bridge. He is the most ingenious Man in that work, and maketh the best Trusses for the retaining the *Hernia umbilicalis* within its bounds. But in great fat Bellies we find it often necessary to put them on a Bracer to encompass the Belly, which may be laced behind or on one side, to bear part of its weight.

Having thus far provided for the retaining the *Hernia* within its bounds, you ought to have the Hair shaved, if there be any, and apply Agglutinatives with good Bandage. If the Boulster sit uneasie, a Quilt may be made to lie under it, or a Compress of Brown-paper soak'd in *aqua fabrorum* wherein some Astringents have been boiled; by which your Truss will sit the easier, and retain the relaxed or torn Parts, and thereby they may be the sooner agglutinated.

Our next Consideration will be matter of Diet, and manner of Living. Their Diet ought to be sparing, but of good nourishment, as Mutton, Veal, Lamb, Puller, Chicken, and the like; avoiding all Herbage, Fruit, Fish, and White-meats, such as may ingender Crudities. Their Bread ought to be of Wheat, with carminative Seeds in it. The confected *semina carui*, *coriandri*, *faeniculi*, and the like, are commended after Dinner, and at other times, to further Digestion. Their Drink a red Wine with a little Water wherein gads of Steel have been quenched; or Ale wherein some of the specifick Plants have been infused.

Rest is of great advantage in the Cure of these *Hernia*. *Fabricius Hildanus*, and others who have writ of this Disease, will tell you, that some have been cured of great Ruptures by keeping their Bed upon some accident of a Fracture, or fit of the Gout, when before their best endeavours in the Cure signified nothing. In consideration of which, they forbid all manner of Exercise; and advise them, that, whilst they keep their Beds, they should often feel with their hands about the Part affected, principally in case of a sudden Sneezing, or violent Coughing, and especially in easing Nature by Stool; that, if any Relapse happen, it may be helped. But that you may the better avoid such Accidents, you ought to keep their Bodies soluble by Clysters, Suppositories, or lenient Electuaries. Where the pituitous Humours abound, they require sometimes also to be purged; for which I refer you to the Chapter of *Oedema*. Afterwards it may be proper to prescribe some Agglutinatives; and they are either Simple or Compound.

The Simple are reckoned among the Vulnerary Plants; not all of them, but such as have a moderate Astringency, and are without remarkable-Heat
or

or Acrimony, and have specificall virtue : such are *consolid. maj.* & *minor*, *quinq̃uefolium*, *equisetum*, *sanicula*, *auricula ursi*, *pilosella*, *jacea utraque*, *figil. Solomonis*, *tormentilla*, *osmunda regalis*, *hippoglossum*, *lunaria min. perfoliata*, *herniaria*, *herba trinitatis*, *cort. cypres. grant.* &c. The distilled Water of *osmunda regalis* is commended in the Cure, so are also *pilosella*, *hippoglossum*, *lunaria*, and severally given in a Powder in a Decoction of Comfrey-roots. *Perfoliata* and *herniaria* are delivered to us to be of so great virtue as to cure this Disease in few days, conditionally the Rupture be kept in by a good Bandage. They may be given as Tea ; or they may be juiced or powdred, and mix'd with red Wine.

The more Compounded are these : *R. conf. ros. rub. vet. symphyti, an. ʒj. florum salvie, acori, an. ʒʒ. trochisc. de carab. vel de spodio, vel e bolo, ʒiij. cum syr. cotoneorum, fiat Electuarium* : of which the Patient may take twice or thrice a-day, drinking thereupon six ounces of this medicated Wine ; *R. herba alchimilla, ophioglossi, nummular. fragar. auricul. muris, veronic. artemisia, scolopendr. perfoliat. an. M. j. virgæ aur. M. ij. rad. cichor. tormentil. bistort. vincetoxici, id est, hirundinariae, an. ʒj. perfoliat. ʒʒ. cort. citr. ʒiʒ. sem. anisi, fœniculi, an. ʒiij. coriandri preparat. cinamom. an ʒj. flor. borraginis, buglossi, an. ʒij. prunel. sylvestr. ʒiʒ. galang. ʒij. passul. enucleat. ʒiʒ. Misc. infund. in f. q. vini optimi ; colatura reservetur pro usu.*

If after the afore-mention'd Endeavours to reduce the *Hernia*, (whether it were by reason it had been too long relapsed, and the Excrements grown hard and dried in the Intestine, or that they were stuffed with Crudities, or inflamed by the constriction in the Production, &c.) you do not succeed, you ought to consider what the impediment is, and proceed accordingly to let blood, purge or vomit, or put him into a *Semicupium*, keeping on his Bag-truss the while : after which, he may, if occasion require, be carried to and fro upon the back of a strong Man with his Head downward, by which the prolapsed Bowels are often reduced. Mr. Smith the Truss-maker told me he had made such an Engine by which he set them on their Heads, and thereby had reduced many, which could not otherwise be relieved.

But the afore-said ways, I bless God, have served the most deplorable Patient labouring of these Diseases under my hands. Yet if it should so happen that all Endeavours of this kind prove ineffectual, and the Patient's Life be threatned by frequent Vomiting and inflation of the *Abdomen*, and nothing pass through him by Stool, I would ask whether in such a case it be not more reasonable to offer in Consultation the laying open the Production while there is strength, than to suffer the Patient miserably to perish under the Disease ? I referr it to the judicious Artist, there seeming nothing of difficulty or danger in the work ; yet would not have it attempted whilst there is hope of otherwise reducing it.

To perform this Operation, the Patient ought to be laid flat on his Back upon a Table or Form, and bound thereon ; then an Incision must be made upon the upper-part of the *Scrotum* to the Production, which requireth also to be divided, without touching the Intestines or *Omentum* : then you are to pass in a *Cannula* (like our common Director, but as big as a large Goose-quill) into the Cavity, under the Process of the *Peritonæum* upwards, avoiding the Intestines ; then make your Incision of such a length as may serve to put your fingers into the *Scrotum*, and raise the Intestines and *Omentum*, which you are to reduce into their natural place within the Belly. They being thus reduced, you must stich up the Wound, as is said in the Wounds of the *Abdomen*, taking up with your Needle so much of the Production as may shut up the Cavity, and prohibit the relapse of the Intestines. That done, cure the Wound,

Wound, as is shewed in the Treatise of those Wounds; it not being so large or dangerous as many of those we have cured in the Wars.

In the farther Cure of these, various Ways have been proposed by Chirurgeons, viz. the Actual and Potential Cautery, also Puncture and Deligation of the Process of the *Peritoneum*, also Incision, with or without extraction of the Testicle. These Ways are not practised amongst our People, they esteeming such Operations full of hazard and cruelty: yet they having been delivered to us by good Authority, I shall shew you how they are performed, and begin with that of the Actual Cautery. In the effecting of which work there are required various sorts of Buttons, some bigger and less than other. Whilst these are in the fire, the Patient must stand, and hold in his breath; by which doing, the Tumour in *Inguine* will be more apparent. Then it is to be circumscribed within a triangular figure: after which, the Patient being placed on his Back, press with your hot Cautery on the middle of that Triangle, and repeat it often, making the form of the Greek letter Γ so deep till you reach to the *Membrana adiposa*, taking care you do not scorch the *Peritoneum*: then dress the burnt Parts with a little Salt and Onion beat together, and afterwards digest and heal the Ulcer as you find proposed in the Chapter of *Burns*, he keeping his bed till he be cured. By this method the Author proposeth a contraction of the Skin by reason of the *Cicatrix*. How this will do without the wearing of a Truss, I much suspect.

Another proposeth the reducing of the *Hernia*, and the thrusting up of the Testicle to the *Os pubis*; then marketh the Compres of the Prominence made by the Testicle, and, shoving it and its Vessels out of the *Scrotum*, he burneth in the middle of that Mark (with a pointed Cautery a little curved) to the very Bone; then dresseth it *cum albumine ovor.* and cureth it as a Burn: by which if he burneth the Bone, it must necessarily exfoliate, and unite with the Skin and fleshy Parts over it, and hinder the prolapse in *Scrotum*. But yet there must remain a *Bubonocèle*, which will require a Boulster-Truss, to prevent its swagging down, as is frequently incident to Women.

The way by Caustick is propounded by others as more easie. The mildest of them is Soap-lees boiled to a stone, with the addition of *sebum vitulin.* and and a fourth part of *opium* added to it at the last. The other are as follow: $\mathcal{R}$ *vitrioli usti* $\mathfrak{z}$ ij. *salis ammoniaci* $\mathfrak{z}$ j. *calcis vivæ, ciner. è vini sæce, an.* $\mathfrak{z}$ ij. these must be bruised and mixed with a *lixivium è cineribus ficuum & tithymal.* then strained out and boiled to a stone. Or, $\mathcal{R}$ *salis nitri, chalcitidis, an.* $\mathfrak{z}$ x. distill them, and cast away the first Water, it being black and unfit for use. The second Distillation is clear, and must be put into a Glass-bottle, in which dissolve *arsenici albi* $\mathfrak{z}$ ij. *tartari albi usti, merc. sublimati, an.* $\mathfrak{z}$ j. then put it into a Copper Vessel, and by a moderate heat consume the humidity; the remaining *sæces* is the Caustick.

In order to the applying of any of these Causticks, the Part must be marked, and the Patient afterwards laid upon a Table, as hath been said in the preceding Operations; then the Caustick is to be applied cross-wise, an inch long and as much transverse, near the *Os pubis*; which having operated to the Bone, it's supposed that Bone shall exfoliate, and the *Callus* arising from it will unite with the Ulcer in the fleshy Pannicles and Skin, and stop the descent of the *Viscera*: which notwithstanding cannot prevent a *Bubonocèle*. Another way is by the application of a Caustick in *Inguine*, then to raise off the Escar, and taking up the *Membrana adiposa* with a Hook, to divide it, and free the Seminal Vessels from the Process of the *Peritoneum*. Then pass a Needle with crude Silk under it, tie it close, and leaving it hanging out digest the Ulcer, incarn and cicatrize it; during which the Silk will have cut through,
and

and fall off: and the Production uniting with the Wound, absolutely confirms the Cure. The Cure by Puncture, is the Invention of some of the Moderns, and is set down by *Ambrose Pareus*.

There yet remain two ways of Cure by Incision: in order to which, the Patient must stand upright, (as hath already been said) that the Rupture, by falling down, may plainly discover its bigness, and that the Part so swell'd may be encompassed with a Circle: after which, the Patient must be laid flat on a Table with his Heels raised up, as in the fore-mention'd cases: then one of the Assistants shall press with his hand upon the bottom of his Belly, whilst the Chirurgeon with his left-hand raiseth up the marked Skin as much as he can, then divideth it with his Knife long-wise down the length of the Process or *Tunica vaginalis*, so as to open that Coat, and lay the Seminal-Vessels bare; which he is to avoid the hurting whilst he takes up the divided Tunicle, and stitcheth it with the Skin so close that the *Hernia* may be retained within the Belly from starting out. Then by Agglutinatives, as *bol. Armen. sang. dracon. thus, aloë, cum albumine ovi*, dress it up, and place him in his bed. If afterwards there be occasion to apply Digestives, *R vitel. ovor. num. ij. far. tritic. thuris pulv. q. s.* After which, you may deterge with *mundif. apii*, and incarn with some such-like Sarcotick: *R terebinth siccat. ʒiij. thuris, mastich. sem. fenugræc. an. ʒss. ceræ ʒj. ol. hyperici ʒx. Misc. S. A.* Then cicatrize it, as in other-like Wounds.

The Empirical way is by Extraction of the Testicle: in the doing of which, the Patient must be laid on his Back, as afore-mention'd, and bound fast upon the place: then the Intestines being reduced, the Assistant shall retain them up with his hands, whilst the Operator maketh an oblique Mark in the Groin, to which place he thrusteth up the Testicle; then makes an Incision so deep and large upon it, as to take it out with the Spermatick Vessels, which he holdeth with the one hand, while with the other he separates it from the Membranes. (In all which cases he must be careful not to lacerate them, for thereby he shall cause Convulsions, and hasten the Death of the Patient.) That done, he maketh a Ligature above the Testicle upon the Vessels, and cuts it off. If there be fear of a flux of Blood, he cauterizeth the ends so tied: then, re-placing them within the Belly, leaving the ends of the Ligature hanging out, he stitcheth up the Wound, dressing as above-said: and during the time of Cicatrizing the Ligature falls off.

In order to these Operations, the Patient ought to be of a strong Constitution and Well-habited, his Bowels emptied by Purging and Clysters, and to be very sparing in his Diet, at least three or four days preceding the Work. But I never yet met one that would submit to any of these ways.

The Cure of the *Bubonocèle* in Women requireth its being reduced and cured as those in Men, by Emplaisters and good Bandage, &c. as hath been already shewed in those.

In the *Hernia umbilicalis* the Cure also consists in the well reducing of it, and in the retaining it so by Agglutinatives and good Bandage. If through neglect of treating it timely, as afore-said, the Skin do wear thin and mortified, you must dress it as such: and after the separation of the Escars, you must then endeavour to take up the *Peritonæum*, stitch it close together, and incarn it with the rest of the Ulcer, as hath been shewed: and after it is cicatrized, endeavour by good Bandage to retain it more easily within its bounds.

There is scarce any Disease little Infants are more subject unto than Ruptures. They are not difficult of Cure, if their Nurses would be careful to keep their Trusses well on: but, through their negligence therein, the Cure is

is frequently rendred vexatious. Therefore I shall begin my Observations with them.

AN Infant of about four months old was discovered to have a Swelling in the left *Inguen*, another in the Navel, and another three fingers breadth higher. That in the Groin, which we generally call *Bubonocele*, was made by Relaxation of the Intestine, as appeared by the noise it made in the time of Reduction. The other two proceeded from Wind. I took the compass of his Hips with a Ribbon, and the next day brought a soft Boulster-Truss of *Holland Linen*, with two Straps fastned to the Boulster : and, having applied an *Empl. ad herniam* spread upon Lamb-skin on the Tumour in the Groin, I fitted the Boulster to it, and reduced it, then tied it on ; then passing the Straps between his Legs, I fastned them with Points on each side behind ; by which the Rupture was retained within the Boulster, not pressing upon the Thigh or Cod. On the Rupture of the Navel, or *Hernia umbilicalis*, I applied a mixture *pulver. thuris, mastich. aloes, &c. sang. draconis, cum albumine ovi*, and made a Compression with an *Emplastr. è bolo* by a small Button sticking in the middle thereof, made of some snips of the same Emplaster, by which the Emplaster under it was retained the closer. On the other above the Navel I applied a Compress made by some pieces of *Emplastr. ad herniam*, and retained them close by applying over them *Emplastr. è bolo*. By this method these *Herniæ* were cured in few weeks. For that in the Groin they had half a dozen Trusses sent them, for shift as occasion offered ; and it was cured thereby in few months.

A Child about two months old laboured of some indisposition of Body, and was observed to have a Swelling in the right Cod. In pressing upon it with my fingers, it seemed to me not to lie loose in the *Scrotum* : it yielded to a moderate pressure ; and, being somewhat reduced, the residue of it jerk'd suddenly up with a noise, which confirmed it an *Hernia intestinalis* by Relaxation. I took the compass of his Loins to the Groin, and the next day brought him an *Emplastr. ad herniam* with some Boulster-Trusses. I reduced the Rupture as easily as I had done the day before, then applied the Emplaster, fitted the Boulster over it, and tied it moderately streight. These Trusses had the Straps stitched on behind ; they were brought between his Thighs, and fastned to the upper part of the Boulster cross each other by Points. I shewed the Nurse how they were to be put, and gave her caution lest the Boulster should at any time gall the Thigh or *Scrotum*, or that by too strict a Bandage the Hip should be hurt, or by too slack a Bandage the *Hernia* should slide down under the Boulster, or whilst it was loose tied those Straps between the Legs should be tied so streight as to bring the Bandage over his Hanches and slip down. Having thus forewarned her, I made my visits the seldomer, as not desiring to appear too officious ; and indeed was fetch'd the next day to a Patient some miles off, where I staid three weeks. At my return I made a visit to this little one, and felt the Rupture slipt down into the *Scrotum* by reason of the slackness of the Bracer ; and the Nurse had pull'd the Straps between the Thighs so overstreight as to bring the Bracer down, and would not believe it could be kept up without a Bandage from the Shoulders. But I reduced the Rupture, tied it streighter, slackned the Straps between the Thighs, and shewed her it could not fall over the Buttocks whilst it was so tied. The next Error she committed was in bracing it too streight about the Hips, whereby she had gauled it on the right Hip ; and then she complained to her Lady, that it was not possible to cure the Child without giving it some healing Drinks ; such and such had been cured so in few days. To this I replied, That the Cure consisted in

the keeping up the Rupture ; that done, it would cure without Drinks : That there was but little to be given to such an Infant. Yet I wished them to consult their Physician therein. I applied an *Emplastr. diachalciteos* upon the Excoriation, with two or three folds of soft linen over it, and braced the Bandage slacker : by which Dressings the Excoriation cured, the Nurse became more experienc'd, and the Child was happily recovered in few weeks ; but left not off the wearing the Truss till the Summer following.

3. Observat. of Hernia intestinalis.

I was fetch'd to a Child half a year old having a Swelling in *Scroto* on the left side. It was a *Hernia intestinalis* by Relaxation. I reduced it easily, and the next day fitted it with a soft Boulster-Truss ; and, having reduced it, applied *Emplastr. ad herniam*, put on the Bandage, and supplied them with more Trusses for change, (they being apt to be-piss them daily ; so that, if they be not carefully attended, they are subject to Excoriation.) Once in four or five days I called in, to see how the Nurse ordered her affair ; and by her diligence the Child was cured in few weeks, but continued the use of the Truss till it was grown stronger, and had bred its Teeth.

4. Observat. of Hernia intestinalis.

A Youth aged eleven years, had been some months diseased with a Rupture before his Friends discover'd it : through which neglect it fell into the *Scrotum*, and indisposed him with Colicks. I was sent for, and saw it an *Hernia intestinalis* on the left side. I endeavoured to reduce it, but could not. I then took measure of his Loins, and the next morning found him in bed, and placed him on his Back, with his Hips high, &c. and with warm Cloths reduced the Rupture ; then put him on a Boulster-Truss made of strong Holland, with a couple of Straps fastned to the lower part of the Boulster ; and having fastned the Truss about his Loins with Points, I brought the Straps between his Legs, and tied them behind. Thus I retained the Rupture. The next day I made him a visit ; and seeing the Rupture well retained, I loosened the Bandage, applied an *Emplastr. ad herniam*, and braced it on again, leaving Directions with his Servant to take care in the bracing the Truss close every morning. This Patient was very active in running and playing daily ; yet by the use of these Emplaisters, and careful Bandage, he was cured in few months, I scarce making him six visits the while.

5. Observat. of Hernia intestinalis.

A Child of about six years of age was brought out of the Country, having some-while suffered under a *Hernia in Scroto*. He had a Truss, but it was not well made. I laid him upon his Back, with his Heels retracted to his Hips. It did not presently yield to a Reduction ; whereupon I caused some warm Cloths to be applied, and then pressed it moderately upward : it returned up with a murmuring noise. I then applied my Emplaister and Bandage ; and, having advised them concerning the use of the Truss, I left them to prosecute the Cure, supplying them with Emplaisters and Bandage. About half a year after I saw him cured.

6. Observat.

A Youth of about nine years of age was brought to me out of the Country with a Swelling in his right Groin : it was supposed to be a *Bubonocoele*, and to that purpose Emplaisters and Trusses had been put on, and the Part thereby inflamed. I felt the Swelling, and, as I thought, the Testicle which was wanting in the *Scrotum*. Upon which consideration I forbade the use of the Truss, and applied an *Emplastr. oxelæi* : by which the heat was removed, the Child freed of his Bandage, and the Testicle left to fall down by degrees ; which accordingly it did, and his Parents were well pleased.

7. Observat. of Hernia ventosa.

The *Pneumatocoele*, or *Hernia ventosa*, appeareth often in *Inguine* in the *Tunica vaginalis*, and maketh a Tumour not unlike that of the Testicle. Such a one was brought to me in the Groin of a Child of about seven years of age. It was as big as a Pullet's-egg, soft, but withal so tense that it yielded little to pressure.

pressure. It had been treated by Bandage, but yielded not thereto, but became more painful. I prescribed a Fomentation and Emplaisters, as hath been set down in *Flatulent Tumours*, and caused a soft Boulster-Truss to be put on, rather to keep it warm and retain the Dressings on, than to make any streight Compression. I treated him by Internals proper in such Tumours, by which he was sometime after cured.

A Gentlewoman brought a Son to *London* with a Swelling in his left Testicle. Several of our Profession had seen it, but delivered no certain Judgment of it, nor prescribed ought in order to the Cure. The Swelling was Wind gotten into the *Tunica vaginalis*, which encompassed the Testicle round, so as I could not feel it. By reason of the Tumour, which was so tense that it would not yield to the pressure of my fingers, I proposed Discutients, and a Bag-Truss. They were dissuaded from my Opinion by some who had rather their Friend should fail of his Cure, than receive it from me. Which hath somewhat appeared in this case: for two years after, the Father of this Child told me he continued as I had formerly seen him.

A Child about two years old had one of these Tumours lying in the whole length of the Production to the Testicle, like unto the uppermost of those Bladders which we find in Carps: and the same Wind, having raised up the *Tunica vaginalis*, made the Testicle not unlike to the lower round Bladders that are united with the fore-mention'd upper Bladders in the same Fish. The Cure was performed by Discutients and a Bag-Truss.

I was fetch'd to see a Child who was (as I supposed) not two months old: it was a very small Infant, much emaciated. A Swelling had been newly discover'd in *Scroto*, and supposed a Rupture: it affected the right *Inguen* down into the *Tunica vaginalis*. The Tunicle of the other Testicle was likewise distended. And the next day, when I brought a Bag-Truss, I found that *Inguen* also affected with the same Disease. Whilst the Infant cried, the Tumour was much; but by an easie pressure with warm cloths it lessened. I designed a Fomentation: but the weakness of the Child, together with its forwardness, deterred me. Whereupon I applied *Emplastr. e cymino* over the *Scrotum* and *Inguina*, and put on the Bag-Truss. The next day I met the Physicians, took off the Truss and Emplaisters, and shewed them that it was a *Hernia ventosa*, not capable of Reduction nor of other Bandage. There was also a *Hernia umbilicalis*, which was likewise from Wind, which I treated as hath been shewed in the First Observation. The Physicians resolved the Milk should be changed: upon doing of which the Child began to thrive. But this Nurse not keeping the Child very dry, the Piss fretted the Thighs and Cod; upon which account I put on a *Diachalciteos* Emplaster, and renewed it daily. It not only cured the Excoriations, but also supplied the place of the other Plaster. During the Cure, I observed that upon good Bandage the Tumour appeared very inconsiderable, and sometimes would be quite discussed: but then through neglect in bracing the Truss close, it would appear very big. The last time I saw the Child it was grown fat, and the Flatulency seemingly discussed: but a Rupture appeared in both Groins. Upon which account a double Boulster-Truss was put on, whereby it is kept up, and in a hopeful way of Cure.

A Man of about thirty years of age, of a full Body, having some time a Swelling in his left Groin, consulted me. I declared it a *Hernia inguinalis*, and advised the use of a Boulster-Truss, which accordingly I brought the next day, with an *Emplastr. ad herniam*; which, after I had shaved the Hair, I put on, and left him Directions how to wear it. He carefully observing the Direction, it was in some months happily cured.

12. Obser-
vat. of
Bubono-
cele.

A Man of a full Body, by a Fall in riding, bruised his left *Inguen* and that side of the *Scrotum* against the Pummel of his Saddle, by reason whereof a Rupture was made in his Groin, and much Blood was extravasated in the *Inguen* and *Scrotum* to the very Prepuce. It was too late to apply Repellents, therefore I prescribed this following Fomentation: *R. summit. majoranæ, absinth. flor. cham. sambuci, an. ʒvj. flor. ros. rub. balaust. an. Mss. nuc. cupres. bacc. myrtyll. sumach, an. ʒiʒ. coq. in vino austero, addendo in fine sp. vini ʒiv. fiat Fotus.* A Cataplasm was also made thus: *R. farinæ fabar. lb̄ss. fursuris tritici M. j. flor. cham. sambuci pulv. an. ʒj. sem. anis. sænic. pulv. an. ʒij.* These were boiled with some of the Fomentation, and towards the latter end some Spirit of Wine, *mel. commun. ol. rutac.* which was applied upon the diseased Parts with a Bag-Truss. We let the Patient bleed, prescribed him Clysters, and keeping of his bed during the Cure. This method of Dressing continued till the Swellings were dissolved: then I shaved the Hair, and applied to the Groin a mixture of *Emplastr. Paracels. & diachalciteos*, with a soft Boulster-Truss, to which a Bag was fitted for the *Scrotum*, to retain the Dressings on. Some few days after, observing that the *Scrotum* was over-moistened as in an *Anasarca*, which hindered the corrugation of it, I applied *Emplastr. diasulphur.* by which the Humour was dried up. After the tenderness of the Groin was removed, I applied *Emplastr. ad herniam*, with a Quilt under the Boulster, and braced it straighter; then, having caused a less Bag to be stitched on to retain the *Scrotum*, I gave him leave to sit up. His Rupture having been reduced from the first night I saw it, there was little doubt but his lying in bed had disposed it to Cure. Indeed, from that time I heard no more of it; but he continued the wearing his Truss longer.

13. Obser-
vat. of
Bubono-
cele.

I was sent for to one about thirty-six years old, of a full Body: he complained of a Swelling in his left Groin. It was *Bubonocèle*, and, by the manner of reducing it, seemed to be of the *Omentum*. I applied an *Emplastr. ad herniam* with a Boulster-Truss, and advised him how to govern it. I heard not from him again in five or six years; about which time being sent for, I found him in bed, bemoaning himself that his Rupture was fallen into the *Scrotum*, and he could not reduce it. I felt it lie unequally in the *Scrotum*. He had, it seem'd, neglected the bracing of the Truss while it lay in *Inguine*, and so it happened that in progress of time it slipped down under the Truss; upon which he consulted some, who put him on a Steel-Truss: but that pinching and gauling, he caused others to be made, of which he shewed me at least half a dozen; but they all hurt him, and did not keep his Rupture from falling down. But now it was so great, that he could not reduce it but with warm cloths: which being done, I fitted to it a Boulster-Truss with a Quilt and Bag. To those Excoriations occasion'd by his Steel-Truss I applied *Emplastr. oxelæi* spread upon coarse linen, which soon cured them; and if his occasions would have permitted him to have kept his bed, he might have been restored to a better condition: but this served his turn as a palliative Cure.

14. Obser-
vat. of
Bubono-
cele.

A Man of about thirty years of age, of a healthy Constitution, came to me with a *Bubonocèle*. I advised him the wearing of a Boulster-Truss, with an Emplaister under it: which for some time he did with much ease, but afterwards became more secure and careless in the bracing it, upon which the *Omentum* slid down half way into the *Scrotum*. It being yet within the Process, I easily reduced it, and applied a fresh Emplaister, and supplied him with more and new Trusses. His affairs would not permit him to stay within-doors, yet by his well-ordering it he was cured in a few months, and, for a trial, he left off wearing the Truss three or four days: but, having been used to it, he could not be without it; so that he continued the use of it, but without the Bag or Quilt.

Another

Another of that age, but not of so good a Habit of body, being diseased with a *Bubonocèle*, had for some time worn a Steel-Truss; but the *Hernia* slid down in *Scrotum* notwithstanding, though often reduced, and the Truss braced more close. Upon an extraordinary relapse, when endeavours of his own failed, I was sent for, and upon examination found the Intestines and *Omentum* both in *Scroto*. I could not reduce them by warm cloths, therefore prescribed him a Clyster, and after it a Fomentation, Cataplasm, and Bag-Truss. The next morning I fomented the Part again, and, placing him in a convenient posture, reduced the Rupture; then shaved the Hair, and applied an *Emplastr. ad herniam*, with a Compress made of Brown-paper which had been all night soaked in an astringent Decoction, and fastned thereon a Boulster-Truss, with a Bag fitted to it for to bear up the *Scrotum*, that, in case the Rupture should slip downwards, yet it should meet with a check. Having thus by Bandage trussed it up, I advised him to keep his bed some days, at least till the Excoriations which the Steel-Truss had made in his Hips were cured. During which, his Diet was slender, and his Body kept soluble by lenient *Bolus's*, and consolidating Drinks were prescribed him. He was one that had no great employment abroad, so was persuaded to keep his bed the longer; during which, the lacerated Parts did unite, and he was cured.

One Summer, whilst I attended the KING at *Hampton-Court*, an Officer belonging to the Larder, a Man of above sixty years of age, having been long afflicted with a *Hernia intestinalis*, which frequently slipped into the *Scrotum*, had it then fallen down past his skill of reduction. I, finding him vomiting and in a Fever, endeavoured by warm cloths to reduce it, but could not. I therefore presently caused a Clyster to be given him of fat Broth, with a little Salt in it, and applied a Fomentation made of the same Broth; and, at length, putting him in a declining posture, I reduced the Rupture, and put on his Truss with a Compress under the Boulster: by which I retained the Rupture up. I would have prescribed him other helps, but he was satisfied that it was reduced. After two or three days he went abroad again, and, for ought I know, is yet alive.

A Person having been long afflicted with a *Hernia*, in *France*, through ill fitting of Trusses had it much encreased, till at length he threw them off, as not only useless, but painful to him. The Rupture was so large, that the Intestines did their office in the *Scrotum* without Reduction. But the weight of them was uneasy, and often accompanied with Colicks, and would by degrees have proceeded to worse inconvenience. I helped it by the palliative way of a Bag-Truss, with a perforation for his *Penis*. This sustained the weight, and enabled him to follow his occasions without farther trouble.

In some People I have seen the Rupture so great, that they have not been able to go; yet not any of them would admit of the most probable of the fore-mention'd Operations, but contented themselves with such accommodation as a Bag-Truss would afford them.

A young Woman, after hard Labour, had a Rupture in her left Groin. I supplied her with a Boulster-Truss, with one Strap and Emplaister, by which she was cured, or at least palliated. In others, where they have not timely consulted, whether through ignorance or shame, they have encreased to a greater bigness, and have made, in progress of time, such a swagging Tumour as became extremely troublesome to truss up.

One of about thirty years of age, of a gross fat Body, laboured of a *Hernia umbilicalis* about the breadth of the Palm of a Hand. He had worn the common

15. Obser-
vat. of
*Bubono-
cele.*

16. Obser-
vat. of
*Hernia in-
testinalis.*

17. Obser-
vat. of
Hernia.

18. Obser-
vat.

19. Obser-
vat. of *Her-
nia umbi-
mon*

mon Navel-Trusses ; but they, not sitting steady upon the diseased Part, pinched him sometimes in one place, sometimes in another, and did not retain the Rupture. I being advised with, and considering his Belly very great, and likely to suffer greater Ruptions, if the weight of it were not timely borne up, persuaded him to permit a Bracer to be made to lace in his whole Belly, under which a Boulster might be placed on the Navel. I took measure of it, and fitted him with such an one as reached from the *Pubes* to the *Cartilago ensiformis*, and laced behind. Under this I applied an *Emplastr. ad herniam*, with a quilted Boulster which was worked upon Sole-leather : this was tacked to the Bracer. In some others I have made a Bandage over that Bracer ; but here it was needless.

20. Obser-
vat. of
Hernia.

One had three *Hernia* besides that of the Navel, *viz.* one in each Groin, whereof the one descended in *Scrotum*, and the other not ; the third lay on the left side of his Belly, raising up a Tumour under the Skin like half an Apple. The *Hernia in inguinibus* were kept up by a Steel-Truss with a double Boulster, to which a Bag was tacked to retain the *Scrotum*. To that on the side of the Belly was applied an *Emplastr. ad herniam*, with a Compress in the middle of it, made of some folds of the same Emplaister, and a quilted Boulster over it. To the Navel there was an *Emplastr. ad herniam* applied, and such-a-like Boulster as was used in the like case in the former Observation of a *Hernia umbilicalis* : and, to retain these close, a Bracer was fitted to the Belly with Straps, which went from the lower part of it between the Legs, and fastned behind, where the Bracer was laced. This Person being fat, was also gauled between the wrinkles of his Belly, which was for some time dressed daily with Epuloticks.

21. Obser-
vat. of
*Hernia um-
bilicalis.*

A Person of Quality, of a full Body, having been sometime subject to a *Hernia umbilicalis*, which through defect in Bandage encreased much, so that the Skin was excoriated by the unequal sitting of the quilted Boulster, I was consulted. The Rupture in the *Peritonæum* was great, and the *Omentum* and Intestines had made their way out to the external Skin of the *Abdomen*, so that between them and the Boulster it was worn very thin. The Excoriation was dress'd with Epuloticks, as *unguent. tutiæ*, &c. and a soft Compress applied between the Quilt and Emplaister. A Belly-piece was made, to bear the weight, and retain the Compression. After this was cured, Mr. Smith was advised with. He made a Boulster with a Bracer to sit under the Belly-piece, which retained the Rupture, and the Patient went abroad daily. But one day, whilst he was about his Affairs, the Boulster slipt off, and the Intestines started out between the Muscle and external Skin, so that he was brought to his Lodgings very ill. Physicians were consulted, and I was sent for, and reduced it with a warm Cloth in their presence, and an Emplaister and Bracer were put on. From which time he hath not been so subject to a Relapse.

A T R E A T I S E O F U L C E R S.

The SECOND BOOK.

CHAP. I.

Of Ulcers in general.

AN *ULCER* is a Solution of Continuity in a soft Part made by Definition.
Erosion with loss of Substance, which loss is in this Description
presumed to be the effect of the Erosion: for if it be the effect of
the Wound, as a piece of Flesh being cut out, &c. it is not imme-
diately an Ulcer; nor doth it deserve that name properly, till by ill handling
there do fall upon it corrosive Humours, which cause a farther diminution of the
Substance: for till then the Digestion and Matter their produced do not alter
the name, but continue the appellation of a Wound; but having once lost
part of its natural flesh by such Erosion, though preternatural do arise in the
room of it much more in quantity than what was lost, as *Fungus*, &c. yet the
name of *Ulcer* remains.

To this Ulcer many Accidents may happen, and especially Tumours of all
sorts: but these are not parts of the Ulcer, being separable from it; for they
may be taken away, and the Ulcer remain. The subject of an Ulcer is chiefly
Flesh, especially in the larger sence of the word, as it signifies Membranes,
Tendons, Guts, Bladder, &c. When an Erosion happens in a Bone, it is
commonly call'd *Caries*.

For the *Differences* of Ulcers, some are more proper, by some Writers call'd Differences.
essential; others accidental. The more proper, or, as some call them, essen-
tial, are taken from the form of the Ulcer and efficient Cause: as from the
figure, magnitude, equality and inequality, and Part affected. From the
Figure; they are straight, oblique, round, or crooked. From the Magnitude;
some are great, others small, superficial, deep, long, short, broad, and narrow.
From the Equality and Inequality: those are equal in which the flesh is alike
plain; unequal, when it is corroded more in one place than another. From
the Part affected; some Ulcers are in the Flesh, others in the Membranes; or
in this or that Part, internal, or external. Differences from the Causes will be
best understood by viewing the Causes themselves.

The accidental Differences are taken from those things which are not intrin-
secal to the nature or constitution of an Ulcer; as, to have Inflammation, Tu-
mour or Putrefaction joined with them, as *Phlegmon*, *Erysipelas*, *Cancer*, *Gangraena*,
Callus, *Varix*, or *Caries*: Also from the Symptoms; some Ulcers are painful,
with

with Pulsation, and pricking burning Heat, others with Itching and Excoriation: From the quality; Ulcers are malign, benign, contagious, or not; rebellious, or easie of Cure: Also from the age of the Ulcer; some are recent, others annual: Also some in their state, others in their declination, only requiring Desiccation.

From these fountains the Differences and Distinctions of Ulcers do arise; the methodizing of which hath already pozed able Writers: we shall endeavour to put them into such order as shall be most plain to the young Chirurgion.

Therefore, 1. we shall speak of Ulcers in general: 2. of a Simple Ulcer: 3. of Ulcers with *Intemperies*: 4. of Ulcers with Pain: 5. of Fluxion: 6. of Ulcers with *Hypersarosis* or superfluous Flesh: 7. of Ulcers with *Caries*: 8. of Sordid Ulcers: 9. of callous Ulcers: 10. of Ulcers called *Phagedæna* and *Dyssepulota*: 11. of Ulcers with *Varix*: and, lastly, of Sinuous Ulcers. I should also treat of Fistulous Ulcers from *Gangræna* and *Sphacelus*; but they have been heretofore occasionally put into the Treatise of Wounds, to which I refer you.

Causes of
Ulcers in
general.

We shall begin with Ulcers in general, and treat, first, of their *Causes*; of which some are Internal, others External: both are (if we speak of immediate Causes) corroding Humours, which eat away the Flesh, Membrane, &c.

If this corrosive quality arrive from Internal Causes, it oweth its original to the excess of an acrid *Serum*: which *Serum*, if it mixeth with any other Humour, whether Choler, Phlegm, Blood, Melancholy, &c. gets a denomination from that.

These Humours, when they abound so far in the Body as to exceed that Temperament *ad justitiam* which is always necessary to health (to which Temperament a latitude must be allowed,) are apt to separate from the whole Mass, and flow either quite out of the Body by natural Excretions, or else upon some Members of it; whether they be carried thither by their own source, or drawn by some attractive Cause.

Being so cast out from the Mass of Blood, they are no longer subject to the Balsam of that, but become acrimonious and corrosive: and by how much the longer the Humour hath been extravasated, by so much the more acrid it becomes; and is the more corroding; acquiring in its degeneration a quality suitable to the Humour out of which it is ingendred.

The External Causes are Poisons, corrosive and caustical Medicaments. Nor do we exclude actual Fire, hot Water, scalding Oil: to which may be referred the Contagions of Scabby, Leprous and Pocky Persons, which are communicated to the Skin, and ulcerate it, and beget the like Disease.

From these diversities of Causes different sorts of Excrements flow: three sorts whereof give name to Ulcers.

1. The one is a thin serous Humour, called *Sanies*; by the Greeks, *Ichor*; by others, *Virus*, from whence they are called *virulent*. *Celsus* reckoneth two sorts of *Sanies*; the one he calleth *Ichor*, and the other *Meliceria*. They are taken notice of by *Fabricius Hildanus*. The *Ichor* is a thin whitish Gleet incident to ill-disposed Ulcers, especially amongst the Nerves and Tendons. The *Meliceria* is a thick glutinous Humour of a pale colour, and it may be yellowish, not unlike Honey, from whence it taketh its name. This also affects Ulcers of ill condition near and in the Joints, where the Membranes and Tendons are eroded. But that which we generally in our common Chirurgery call *Sanies*, is a thin excrementitious Humour begotten from abundance of serosity in Ulcers, and rendring them humid. Of which Humours some are hot and reddish

reddish-coloured, others cold and pale-coloured. These are called *Sanious Ulcers*.

2. There is a second sort of Matter affecting Ulcers, that is thick, generated of abundance of gross tough Humours, and rendering the Ulcer foul; whence it is called a *Sordid Ulcer*. This kind of *Sordes* differeth as it is white or grayish, though unequally coagulated, or else as it is blackish and foetid.

3. The third sort of Matter is of a middle consistence between thick and thin; sometimes of greenish or yellowish colour, and then it hath a rank smell; but for the most part it is of a white colour, and is called *Pus* or *Matter*. And this is supposed to proceed from a benign *Serum* flowing to the Part affected for its nutriment; which, by reason of the weakness of the Part, is not assimilated, but converted into a whitish substance, and giveth the name of a *Purulent Ulcer*.

These Differences of Excrement in a Sore are best understood by considering the causes of their generation. For if the nutritious *Serum* be well conditioned, and the Part not affected with Wound, Tumour, or other preternatural weakness, it is by Nature converted into Nourishment: but if there be a Solution of continuity, then she, failing of her first Intention, acteth according to her Ability, and according to the quality of the *Serum*. If the Constitution be good, and the *Serum* well-conditioned, then we find a laudable *Pus* to arise, which is white, smooth, and easie to the Part, and every day approacheth nearer and nearer to the true nutritious Juice, till by degrees the Ulcer fills up with Flesh and heals. But if it degenerate towards a sharp virulent *Serum*, then the Ulcer appeareth full of a thin *Ichor* or *Sanies*, Nature's Balsam being weak, and her heat insufficient for a due concoction of the Matter. If the Blood grow phlegmatick, its *Serum* is so too, and groweth gross and slimy, and wanting heat, doth corrupt into a thick glutinous Matter, which we call *Sordes*; and sometimes a stinking Matter, which makes a *Putrid Ulcer*.

An Ulcer, if it be in the outward Parts, is discoverable by the Sight. If it Signs. be inward, viz. in the Ventricle, Guts, *Uterus*, Kidneys, &c. it must be guessed at by the Excrements that come from it, and other Symptoms. The greatness and littleness is likewise distinguishable by the eye, if it be in the Superficies. But Ulcers that are deep require farther search of Probes, &c. and, if inward, must be presumed proportionable to the quantity of the Matter that floweth from them. Equality and Inequality are also judged by the view; so Sinusity and *Caries* by Probing.

Sanious Ulcers are known by the undigested *Serum* that gleets from them: and if the Gleet be corrosive, we find the flesh waste apace. If that Erosion be with jagged and callous Lips, it is *Phagedena*, or at least virulent. If the Matter issuing out be slimy and gross, it is a sordid; if foetid and corrupt, it is a putrid Ulcer. If it be only superficially corrosive and spreading, it is a *Herpes exedens*.

The nearness of a Nerve, Tendon or Ligament, is best understood by the pain, which is commonly acute. If a Nerve lie near, and cause pain, it is apt to contract the Limb, or cause Convulsion. An Artery if near, is discovered by Pulsation.

To make a right *Prognostick* in the Cure of Ulcers, we ought first to observe well the greatness of the Disease, and what strength the Patient hath to overcome it: for if that be deficient, our Endeavours to cure them will prove vain. Prognostick.

The greatness of the Disease is known, either by the quality of the Part affected, or by the depth or other conditions of the Ulcer.

As to the quality of the Part: Those in the Skin are not dangerous, nor difficult of Cure, but as they are accompanied with *Intemperies*. Ulcers in the Emunctories, by reason of the great Vessels, may be dangerous, and through moisture of the Place are difficult of Cure. Those near any principal Part are not without danger, for that by their penetration the neighbouring *Viscera* may suffer. Ulcers in the Muscles of the Spine of the Back and in great Joynts are of great danger and hard Cure: amongst the Tendons and Bones of the Hands and Feet they are painful, by reason of their exquisite sense, and of difficult Cure.

The depth and largeness of the Ulcer makes the Cure hazardous: for in great and wide Ulcers the native heat is much weakened; and if they penetrate under any great Artery, Nerve or Tendon, that you cannot safely lay them open, the Cure must needs be slow, and the great discharge of Matter may exhaust the Spirits of the Patient.

The Condition of the Ulcer is of great moment in Prognostick: where we are to consider both the quantity and the quality of the Humour flowing to it. If it be in a depending Part, and the Body Plethorick, the very multitude of Humours (though otherwise not bad) is a sufficient impediment of a Cure: so also if the quality be amiss, though the quantity be not great. For when the Ulcer is accompanied with a dry *Intemperies*, it frequently eludes your Medicines. The case is as bad when Ulcers have continued so long as to bring an habitual Discreasy upon the Part: as we see in the *Nomæ* and annual Ulcers, which are either not cured at all, or with danger to the Life of the Patient. A decree beyond these are the Phagedænic Ulcers, and worst of all the Cancerous and Sphacelous: of all which in their due Places.

Cure.

In the Cure of Ulcers in general, we shall consider the Ulcer first as it is simple, with Solution of Continuity and Erosion; then as it is compounded, and hath other Symptoms or Indisposition joyned with it.

The Simple Ulcer, as it consisteth in a Solution of continuity, requireth Union; and as it hath lost of Substance, Restauration: and this is effected by Exsiccation; for so long as the Ulcer continueth sanious or sordid, it cannot heal: therefore in such cases Digestion or Deterfion are required.

The loss of Substance is either of Skin or Flesh. If only the Skin be wanting, the Flesh is so to be dried with Medicaments, as the Juices coming thither may be hardened into a callous substance resembling Skin: for that it is a spermatick Part, and cannot be regenerated. If the Flesh be wanting, it must be renewed: which work is performed by the Benefit of Nature out of a part of that blood which was designed for the nourishment of that Member. But forasmuch as in the generation of Flesh in an Ulcer there is a twofold Excrement separated, the one thin, the other thick; the thin, as I said, requireth to be dried up, and the thick to be deterged.

But in the Cure of Compound Ulcers many Indications are requisite, according to the variety of Causes and Symptoms which attend them. In the application of Medicaments to those Ulcers you ought to consider their beginning, augment, state, and declination. In the beginning the *Sanies* is crude and watery, and requireth the benefit of Concoction whereby it may be made thicker, and turned into good Matter; in which case Suppuratives are of use: which is not allowable in putrid Ulcers, for in that case they increase Putrefaction; and in purulent ones also they render the Ulcer more lax, and at length sordid. If the Indisposition of the Ulcer be caused meerly by the pain, Suppuratives are convenient; for by their digestive and lenient quality they mitigate the pain, and thereby remove the Cause: which Suppuratives are to be continued till the Matter be well concocted. And for this reason it is we use them

them in the beginning, lest the extravasated Humours should corrupt, and stir up Pain and Inflammation. In the Augment, when the Matter is less in quantity and thicker, we use Detergents to cleanse it. in the State, when the Ulcer is well cleansed, it may be reasonable to use Sarcoticks: and in the Declination, as the Ulcer fills with Flesh, we do our Endeavours by Epuloticks to cicatrize it.

But if the Ulcer labour under any Distemper or Symptom, whether it be internal or external, as influx of sharp corrosive Humours, whether they abound in the whole Habit of Body, or affect only the Part it self; they are all to be removed before you can hope for Cure. The consideration of which indicateth many Intentions: we shall reduce them to four Heads. The first shall be of a regulation in Diet, and the other Non naturals: the second of Evacuation, Revulsion, and Derivation of the antecedent Matter: the third shall have a regard to the Part in which the Ulcer is seated to strengthen it against the Influx: and the fourth and last treateth of a due application of Medicines to the Ulcer it self.

1. To satisfy the First Intention, their Diet shall be proportioned to the strength of the Patient, according as the Humours are peccant in quantity or quality, and abound the whole Body, or in some particular Part; that their heat and acrimony may be contempered. To which purpose there is regard to be had that the Air be good, and their Exercise, Passions of the mind, &c. be moderated, according as hath been said, in the former Treatise, of *Tumours in general*.

2. The second Intention consisteth of Evacuation, Revulsion, and Derivation of the Humours. If they abound in quantity, or offend through their evil quality, it may be made either by bleeding, if their strength permit, and other things be consentaneous, which also makes Revulsion; or by Purging or Vomiting.

Derivation is always made in the remote Parts, and according to the rectitude of the Vessels, either by opening a Vein by Lancet, or by the application of Leeches, Cupping-glasses, Blistering-plasters, Friction, Binding, &c. for which I refer you to the Treatise of *Tumours*.

3. The third Intention hath regard to the weakness and *Intemperies* of the Part affected: to which purpose the Humour may be intercepted in their course by the application of astringent and repellent Medicaments on the sound Parts above the Ulcer, in the nature of Defensatives. If the Member be dependent, the raising of it up, and placing it equal with or higher than the rest of the Body, may be of great advantage: the Influx may also be restrained, and the Part strengthened by expulsive Bandage. We may also by Alteratives correct their acrimony, and, if the Humours be too serous, in-cassate them, or, if otherwise they offend, rectify them by their contraries. How farther to resist the various Symptoms attending Ulcers shall be set down in the particular Cure of each several Species.

4. The Fourth Intention is in curing the Ulcer it self; which is, as I have already said, by drying up the excrementitious serous Humour, and detarging the more gross. The Medicaments proper thereto, with the method in applying them, shall be treated of in the particular Cure of each Ulcer, to which I hasten.

CHAP. II.

Of a Simple Ulcer.

Description.

Kinds.

Cure.

A Simple Ulcer is a Solution of Continuity with Erosion, having no other Symptom or remarkable Affection joyned with it. Of these, Authors make two kinds; the one only with Skin off, and the other with the loss of Skin and some part of the Flesh. As they call the first *planum* or equal, so they call this latter *Cavum*. The former is inconsiderable: the Cure of the latter I shall here deliver.

In the doing of which two things offer themselves: the one is the generation of Flesh, to fill up that Cavity; and the other is the making a *Cicatrix*, to unite the separated Lips of the Ulcer.

To the prosecution of the first Intention, in restoring the lost Flesh, it is necessary that the Part affected be free from distemper: for the generation of Flesh is the work of Nature, and her strength consists in the just temperament of the Part; which being so, our endeavour ought to be, that the *Succus nutritius*, whereof the Flesh is generated, be good, and that it flow moderately into the Part affected. To which purpose a good Diet must here also be observed, with a regulation of the Non-naturals; that the Air be temperate, Exercise moderate, and in some cases none at all. In Sleeping and watching a mediocrity ought to be observed; natural Evacuations are to be continued, and the Quiet of the mind to be preserved. If these things be duly observed, and the tone of the ulcerated Part preserved by the moderate inflowing of good Juices, and the Matter in the Ulcer well digested, it is then capable of being healed: but if the Ulcer be too dry, moist, or crude and undigested, it cannot incarn. Therefore it behoves that we consider the temper of the Part ulcerated, and the Excrements flowing thereout, and thence take indication whether to use Suppuratives or Detergents, and when Sarcoticks are convenient, or one more than another. Suppuratives ought to be of a lenient quality, temperately hot and moist, proportioned to the Habit of Body, as it is weak or strong, and to the temper of the Part they are to be applied unto. The common Digestive is *terebinthina* in tender Bodies, with *far tritici*, a little *crocus pulv. cum vitell. ovi*. In drier Bodies we add *far. hordei*, *fabar. colophon. thus, pulv. sem. fœnugræci*: to which we sometimes add *mel. rosat. & syr. de ros. sicc. Unguent. basilicon* is not inferiour to any. These Medicaments ought to be of a moderate consistence: not too liquid, lest they make the Flesh too lax, or run off the Pledgits, and leave them uneasy to the Sore. For the same reason your Medicaments are not to be of too hard a consistence, The deeper Ulcers may admit of the more liquid, that they may reach to the Bottom. They are to be used upon Lint in the form of Pledgits, Dossils, or Tents; and over them may be applied Refrigerants, to contemperate the heat of the Part, and resist the Fluxion.

Suppuratives are of no longer use than till the Matter be well digested; for through the too long use of them the Ulcer may be made sordid: therefore when the Matter appears well digested, we mix Detergents with them, to cleanse the Ulcer. Of the milder sort is this: *R. terebinth. lot. in aq. acetos. ʒiv. succ. apii ʒj. coq. ad consumpt. succi, deinde adde vitell. unius ovi*. Such is *mundif. Paracelsi*. In these kind of Ulcers I have frequently digested, deterged and incarned by the use of *Merc. præcipit.* mixt with *unguent. basilicon* more or less. The Ulcer deterged, (which you may know by the good condition of the Matter, together with the ruddy colour and firmness of Flesh,) you may then proceed by

by Sarcoticks. In the use of which you are to remember, that in the generating of Flesh two sorts of Excrements arise, the one thin, called *Sanies*, the other thick, distinguished by the name of *Sordes*. How they disturb the Ulcer in its healing, I have elsewhere told you, and now advise you that you consider the temper of the Part, and what sense it hath, and fit Sarcoticks accordingly, moderately to dry and cleanse; lest through error therein by over-drying you consume the Flesh you designed to raise, or by too moist Applications render it corrupt. The season of the year is herein to be observed: for in the hotter season Medicaments more cooling are required, and in cold weather more heating. Therefore at such times we put thicker Compress, and take more turns with our Rowls, than in hot weather. The Habit of Body is also to be regarded. For in lax and tender Bodies Sarcoticks require to be moderately drying, such as are *olibanum*, *thus*, *aloe*, *cort. thuris*, *far. fœnugraci*, *orobi*, &c. The Compounds are, *unguent. matrisylv.* or *basilicon magn. diapompholyg. unguent. tutiæ, calaminaris*: or this: *℞ myrrhæ, aloes, an. ʒss. thuris ʒj. mastich. ʒss. gum. elemi ʒiij. terebinth. Venet. ʒiv. ol. hyperici q. s. fiat Unguentum.* The more drying are, *rad. ireos, aristoloch. rot. far. lupinor. sarcocoll. assa fœti.* da made up with *mel despumat.*

If these Medicaments be well proportioned to the nature of the Ulcer, the Matter will appear of good colour and consistence, and in less quantity, and the Flesh of a natural colour, firm, and drawing into a healing condition. But if the Medicaments were too drying, the Flesh in the Ulcer will be pale, the Matter thin, and the Parts about heated with the disturbance.

The Ulcer incarned, you are to endeavour to cicatrize it by drying the Flesh into *Callus*: and forasmuch as *Callus* is drier and harder than Flesh, therefore your Medicaments ought to be more drying than those you incarned with, and to be endued with an astringent Quality.

The making of this *Callus* is the work of Nature, yet is furthered by the application of Medicaments, (as I have said.) If the temperament of the Part be well disposed, you may observe the Ulcer to skin from the edges while it is filling with Flesh within and without the help of Epuloticks: but where the Part hath been long affected with Ulceration, it is usually weak and out of temper, and is very difficult to cicatrize; therefore it requires Epuloticks accordingly more drying and astringent.

The milder cicatrizing Simples are, *bolus Armen. sang. dracon. creta, pulv. ostreorum combust. ros. rub. balauft. sumach, calx lota, cerussa, plumb. ustum, iutia.* A mixture of some of these may be sprinkled upon the Ulcer, or a Decoction of them applied upon Lint. The stronger are, *sacchar. Saturni, vitriol. Rom. æst. squamæ aris, ferri, croc. Martis astringens.* These Powders may be mixed with Unguents. Or, *℞ unguent. calaminaris, Emplastr. grisei, an. ʒj. liniment, Arcei ʒss. sacchar. Saturn. ʒi. ceræ q. s. fiat Emplastrum.* Or some of the above-said Powders may be decocted or dissolved in proper Waters, and applied upon Lint, taking care that you do not by the use of them consume the Flesh, instead of condensing it into Skin.

The time of applying Epuloticks is, when the Flesh is rising up near the Lips of the Ulcer, (before it grow too high) that it may be dried to cicatrize even with it; for Nature is not wanting the while to incarn. Therefore if you defer the use of Epuloticks till the Flesh be grown equal with the Skin, you will be forced to use Escaroticks, or make an unseemly *Cicatrix*: to avoid which we generally apply Epuloticks to the edges while we are incarnating the middle. For by the way you must take notice, that none but ill conditioned Ulcers begin to cicatrize from the middle. If the Lips of the Ulcer lie not level with the Ulcer, it will not easily cicatrize:

trize : therefore in such case you must make a more strict Compression by Bandage.

1. Observat. of a Simple Ulcer.

AMongst the various and sundry sorts of Ulcers that happen daily under my Cure, I find it difficult to make out one Simple Ulcer, as Authors have described it to us, without other Symptom or Affects joyned to it; every Ulcer having somewhat of distemper till it be digested and brought into a healing condition. In which regard we shall call that a Simple Ulcer which hath fewest Accidents attending it, and shall give you an Instance of one in a Gentleman, who having a small inconsiderable Pustle risen upon one of his Legs on the outside, he not taking notice of its mattering, it adhered to his Stocking, and became ulcerated in the Skin, with a small Inflammation and Swelling. I dressed the Ulcer with *unguent. basilicon* upon a Pledgit of Lint, applying *Emplastr. oxelæi* with a soft Compress of linen over it, and rowled it up from the Small of the Leg to the Gartering, advising him to favour his Leg what he could, by laying it sometimes upon a Stool. Thus in two or three days it was digested, and freed of the Inflammation and Swelling. From that time I dressed it with *unguent. tutiæ Vigon.* by which I cicatrized the Ulcer to the compass of a silver Half-peny. The Patient supposing himself cured, left off the use of the Bandage, and gave himself the liberty to walk abroad: upon which the Lips of the Ulcer grew high, and became incapable of cicatrizing that way. I therefore made a Paste of Ceruse with *unguent. rosat.* which with Compress and Bandage pressed the Lips even with the Ulcer, and cicatrized it in three or four days, whilst he was attending his affairs at home.

2. Observat. of a Simple Ulcer.

Such another was commended to my hands by Doctor *Weatherly*. The Ulcer was in the Leg, and had been very vexatious to the Patient: it was accompanied with some little Fluxion, enough to relax the Parts, and keep the Ulcer from digesting, and consequently from healing. I dressed it as in the former Observation hath been said; only instead of a Rowler I put on a laced Stocking: by the wearing of which the Humours were restrained, and the Patient cured himself in a few days by the Unguents fore-mentioned.

CHAP. III.

Of Ulcers with Intemperies.

IT frequently happens that Ulcers are subject to various complicated Affects: Therefore the Cure must necessarily vary accordingly. For which cause we shall now treat of Ulcers as they have Symptoms or Diseases joyned with them; and begin with those that labour under *Intemperies*, whether from corrupt Juices in the whole Body, or Imbecility in some particular Part. Whatever it is, that Cause must be first removed, before you can hope to make good Digestion in order to the incarning or cicatrizing of the Ulcer.

Kinds.

Intemperies is simple, or compound. The simple are four; hot, cold, moist, and dry: the Compound are, hot and moist, hot and dry, cold and moist, cold and dry. We shall begin our Discourse with the Hot *Intemperies*.

Hot Intemperies.

A hot *Intemperies* may arise from a Fermentation of the Serum in the Blood, and that from ill Habit of Body, ill Diet, or the like; also from heat of the Air, or keeping the Part affected too hot, by lapping too many Cloaths or Rowlers upon it, or by reason of too strict Bandage, or by the application of too sharp Medicaments.

A cold

A cold *Intemperies* is caused by abundance of pituitous Humours, or by exposing the Ulcer too much to the air in the time of dressing, or by the not enough defending it in cold weather by good Compresses and Bandage, or through the Application of Medicaments too cooling. Cold Intemperies.

A dry *Intemperies* may be occasioned by the exhausting of the natural heat, as in long Chronick Diseases, Hectical Indispositions, or by too slender Diet, or the like; also through defect of Aliment in the Part it self for want of use, as it frequently happens where Ulcers have long affected the Member. Dry Intemperies.

A moist *Intemperies* may proceed from abundance of Humours in the Body, and Imbecility of the Part affected from hard Bandage or too slabby Applications, or possibly want of Bandage. Wet and foggy weather is frequently a cause of it. Moist Intemperies.

If the *Intemperies* be hot, the Ulcer and Parts about it are red, and the Patient complains of heat in the Ulcer. Also the Matter is sharp, whence a pricking and burning is frequently felt, and sometimes an itching in the Part. The Cause preceding will shew the nature of the *Intemperies*. Signs of hot.

These sorts of Ulcers are relieved with cooling Medicaments, and exasperated by those that heat.

The cold *Intemperies* may be distinguished by the livid or pale colour of the Ulcer and Parts about it; the Flesh in the Ulcer is whitish and loose; the Patient also complains of cold. It finds relief by Medicaments that are heating. Signs of cold.

A moist *Intemperies* may be judged by the too much humidity in the Ulcer: and if that Humour be not acrimonious, the Flesh will be luxurious and flaccid. The great discharge of excrementitious Humours and the Habit of Body will evidently discover the Cause. Signs of moist.

A dry *Intemperies* is for the most part judged by the Habit of the Body, it being lean and dry; the Member or Part diseased is also dry and squalid, the Lips thin and lank, and with little moisture. Signs of dry.

By the Signs of these Simple *Intemperies* the Compound may be judged of. Prognostick.

As all Ulcers complicated with great Diseases are of difficult Cure, and therefore called Cacoethe: so these Ulcers labouring under *Intemperies*, though they be well handled, are hard of Cure, and may be truly reckoned among the Cacoethe, malign and rebellious Ulcers. But those accompanied with Siccity are the worst; for that we are necessitated to neglect the Cure of the Ulcer, to succour the Part affected. The Cure is also long in effecting, by reason that the whole Habit of Body requires by Humectation to be altered, which is a work of time, whereas the Ulcer distempered with heat, cold, or moisture may be cured while you are removing the *Intemperies*. to cure A blood

THE Cure of these Ulcers consist in the removing of the *Intemperies*. Therefore in the first place you are to consider whether it be hot, cold, moist, or dry, and endeavour to restore the Diseased Part to its natural temper by its contraries; as if it be hot, treat it with Refrigerants, to the moist apply Desiccants, and so the rest: having care the while that you do not neglect the Cure of the Ulcer. But if it be so that both may not be relieved at one and the same time, then you are to regard that which most requires your help. If the Ulcer be accompanied with a hot *Intemperies*, that must be first removed by Refrigerants of an astringent and repellent quality, milder or stronger according to the greatness or smallness of the Distemper. Also a cooling and moistening Diet is to be observed, with regulation of the Non-naturals. If there be *Plethora*, Purging and Bleeding are necessary, as well for Evacuation as Revulsion. The Ulcer it self requires detergent and exsiccant Remedies: But in consideration that the hot *Intemperies* consumes the humidity in the Ulcer Cure of a hot Intemperies.

cer, and renders it less moist, therefore these Ulcers are to be treated with the milder Driers, yet with regard to the greatness of the *Intemperies*, and the quantity of Matter the Ulcer discharges. The Topicks are *unguent. diapomphol. tutiæ, album unguent. è plumba, è calce, basilicon*, with Præcipitate.

The external Remedies to be applied over the Part affected, to abate the heat of the *Intemperies*, may be *unguent. album camphorat. Emplastr. diapalm cum succis, Emplastr. oxelæum, &c. unguent. refriger. Galeni, nutritum, & populeon*. The Unguents may be applied simply, or made into a Cerote with white Wax. Over them may be applied cloths dipt in *Oxycrate*, or red Wine, or Juices of *fol. plantag. polygon. lactuc. burs. pastoris*, with *acetum*, or red Wine, wherein have been infused *flor. ros. rub. bacc. myrtil. balaust. sumach, &c.*

Observat.
of an Ul-
cer with
hot Intem-
peries.

A Reverend Divine of a good age, having laboured some months under an Ulcer on the inside of his right Leg along the Shin-bone with much pain, sent for me. The Part affected was distempered with great heat, and the Ulcer discharging a *Sanies*, Endeavours had been used to digest it *cum terebinth. & vitell. ovi*, and such like, unsuccessfully. I fomented the Ulcer and Parts about with Claret-wine, and dressed it with two Parts of *unguent. diapompholyg.* and one part of *unguent. basilicon maj.* with Præcipitate. Upon the Lips of it I applied Pledgits spread with *unguent. diapomphol.* and an Emplaster of some of the same *diapomphol.* over all with Compress wrung out of the Wine, and rowled it up lightly, placing his Leg in bed as before. The next day I brought a Decoction of *fol. plantag. summitat. rubi equiseti, flor. ros. rubr. balaust.* to which I added some Wine; and while it was heating I took off the Dressings, and found the heat somewhat allay'd, and the Ulcer well disposed to Digestion. I stuped the Ulcer, dressing the Parts about with *unguent. tutiæ mag. Vig.* and rowled it up as before. By this method the hot *Intemperies* removed, and the Ulcer digested: after which by the help of *unguent. desiccativum* and the Alume-stone I cicatrized it firm, to the satisfaction of the Patient and his Relations, leaving him again to the care of his Physicians Sir *Alex. F.* and Sir *Fr. P.* by whose order I made him a Fontanel, and some while after put him on a laced Stocking.

Cure of a
cold In-
temperies.

IN the Cure of an Ulcer with a cold *Intemperies* there is required an Advance in Diet and other Non-naturals as hath been prescribed in cold Tumours, with Purgations to evacuate the *Cacochymia*, and alterative Decoctions to attenuate and dry the Humours. Outwardly are required Medicaments heating; and, forasmuch as it is the nature of cold to streighten the Pores and harden the Flesh in Ulcers, they ought also to be attenuating and rarefying. The Medicaments proper to dress the Ulcer ought to be drying and detergent. The degrees of these qualities must be taken from the distemper of the Ulcer and Part affected, as it is much or little; also from the Age of the Patient, and season of the year; and from the greatness or smallness of the Ulcer.

The *Intemperies* of the Part we correct by Decoctions of *absinth. scabios. agrimon. salu. betonic, flor. cham. bacc. lauri, juniperi*, with the addition of Wine or *spirit. vini*, and all those Medicaments proposed in the Cure of Oedematous Tumours, applied hot with Stupes. Those proper to deterge the Ulcer are, *mundif. ex apio, mundiff. Paracels. unguent. apostolor.* The Emplastres are, *diachyl. treat. betonica, barbarum magn. diasulphuris, flos unguentorum*. After which you may proceed with Sarcoticks and Epuloticks, as shall be said.

A Person of about twenty five years of age, of a gross fat Body, was vexed with an Ulcer in his right Leg. The Ulcer was large, crude and undigested, and the Lips thick, the Parts about the Ulcer pale, and yielding to impression. I fomented the Ulcer and Parts about with Wine, fill'd up the Ulcer with Præcipitate, and applied *unguent. nicotianæ* over it, with *Emplastr. de sandyce*, Compress and Bandage, and dressed it not again till the third day. In the while I purged him with an Apozeme made with a *Decoct. polypodii, fennæ, rhabarb. agaric. sem. carthami*, to which was added *syr. despin. cerv.* and put him into a Decoction of *sarsa, lign. guaiaci, sassafras, &c.* then provided a laced Stocking and a Fomentation made of *absinth. hyperic. centaur. flor. cham. bacc. myrtill. ros. rubr. and balaust.* boiled in Wine and Water, with an addition of *spirit. vini*: after that I took off Dressings, fomented the Part affected, and dressed the Ulcer cum *unguent. Nicotianæ*, with a mixture of *pulv. præcipitat.* and *Emplastr. diachyl. ireat.* and laced on the Stocking with the good Compress under it. By which I brought the Ulcer to Digestion, flatted the Lips even disposed it to incarn, and afterwards cicatrized the Ulcer with Pledgits pressed out of a *spir. vini* wherein was dissolved a few grains of *sacchar. Saturni*.

Observat.
of an Ul-
cer with
cold In-
temperies.

IN the Cure of an Ulcer with a moist *Intemperies*, slabby and greasie Medicaments are to be forborn, and drying to be used: and, in consideration that the Part is weakned by the too much humidity, you are to mix Corroboratives of an astringent faculty; the Ulcer also requireth to be dried. The Medicaments ought to be proportioned according as the *Intemperies* affects the whole Body, or some particular Part, and as the Ulcer is great or small. Diet, Air, Contemperatives are also here to be considered. The simple drying Medicaments in these Ulcers are, *Litharg. auri & argenti, minium, cerussa, plumb. ust.* and the like, of which Medicaments may be made up. Or you may make choice of some of these Compounds. *℞ plumbi usti, diapompholyg. lot. an. ʒj. ol. myrtill. & ceræ q. s.* or, *unguent. diapompholyg. tutiæ mag. unguent. è calce lot. unguent. nutritum, album camphorat. desiccativum rubr.* or, *℞ cadmiæ ʒiſs. æruginis, æris combusti, an. ʒij. alum. scissilis ʒſs. ceræ novæ ʒv. sevi arietin. q. s. Misc. fiat Unguentum.*

Cure of a
moist In-
temperies.

If the Ulcer requires to be fomented, a Fomentation may be made of *summitat. absinth. fol. beton. flor. ros. rub. summitat. rubi, bacc. myrtill. nuc. cypress. balaust. sumach, &c.* boiled in Wine or Oxycrate. Also *aq. calcis* and *aluminosa* are useful in the drying up of the humidity in the Ulcer and Parts about it.

A Gentleman of a full Body, between fifty and sixty years of age, abounding with *Cacochymia*, and subject to Swellings in his Legs by reason of the Gout, which he was frequently afflicted with by some accident rubb'd the skin off his left Leg. He endeavoured the curing it by healing Medicaments, but it was thereby the more exasperated, and spread larger. I, observing the too moist *Intemperies* of the Part, and the Matter crusted about upon the sound edges, bathed it with *aq. calcis*, dressed the Ulcerations with *unguent. de lithargyr.* and applied a Compress wrung out of the said *aq. calcis* over that with good Bandage. After I had thus dressed him, I let him blood in the Arm about ten ounces, and the next day purged him with half an ounce of *Elect. Caryocostin.* But notwithstanding these endeavours, I found in the taking off Dressings a great discharge of a hot serous Humour, which increased the Ulcerations much. I therefore caused a Fomentation to be made of some of the aforementioned Ingredients, to fortifie the weak Part against the Influx, and to dry up the Ulcer, and applied my Pledgits, spread with Epulorick, somewhat more distant one

Observat.
of an Ul-
cer with
moist In-
temperies.

from another, that the thin Humour might get out between them; then applied a Compress spread with *unguent. nutritum* over all, rowled it up equally, repeated the Purgation, and ordered him each other night 3vj. *syr. de meconio in aq. papaveris rhæad.* with a little *aq. cinnamom. hordeat.* Observing in taking off my Dressings, that the Matter would in spite of my endeavours be here and there shut in by the Pledgits which lay upon the edges of the Ulcerations, I sprinkled them with *pulv. lap. tutiæ præparat.* and forbore the use of Pledgits there, supposing that way to give vent to the Matter, and at the same time to cicatrize them, and the while dressed the Ulcer with Pledgits pressed out of a stiptick Decoction in some place, and in other with *unguent. è plumbo.* But I found on the next Dressings that the Powder crusted upon the edges, and by retention of the Humour caused Erosion underneath. I then made a Solution of *pulp. lap. tutiæ, corn. cerv. ust. calx lot. &c.* in a Decoction of *fol. plantag. salicis, summitat. rubi & equiseti,* dipping little bits of fine Lawn in it, and applied Desiccatives upon that; on the edges, *unguent. desiccativum rubr.* mixt with *unguent. è calce lot.* in the middle I sprinkled some Powders, as *bol. Armen. corn. cerv. ust.* Various Endeavours were used; but by this last way the Ulceration was cured. Then a laced Stocking was put on, which restored the Part to its natural tone. Of this *Intemperies* you will find an Observation in *Herpes*, and another in the Treatise of *Wounds*, particularly that in the outside of a young Nobleman's Leg which puzzled two eminent Chirurgeons, as well as my self. And where-ever you meet it, you shall find difficulty.

Cure of a
dry In-
temperies.

IN the Cure of an Ulcer with dry *Intemperies*, you are to apply your endeavours more immediately to the removing the *Intemperies*, and content your self the while in digesting the Ulcer, and keeping it clean. You are here to consider the Cause of the Drought; whether it were from defect of Nourishment in the whole Body, or in some particular Part, or in both. If the first, then a good Diet must be directed of such meats as are of easie and good nutriment. In this case Wine is allowed to be moderately drank. In the second and third cases, you are to endeavour that the aliment be attracted into the affected Part by putting it upon action, if it may consist with the Cure of the Ulcer. Otherwise Friction, Pitch Emplasters, Fomentations, Embrocations, Fontanels, and the like, are to be used, to stir up heat in the Part affected. The Fomentations are to be applied moderately warm, and the Member to be bathed till it looks red and begins to swell: then you are to desist; for if the Member be longer fomented or chafed, you may dissipate what you attracted. The Medicaments afterwards to be provided ought to be humecting, as a mixture of Water and Oil; also such like Cerote may be applied: *R. succ. bismativæ & parietariæ an. 3ij. ol. amygdal. dulc. 3vj. ceræ albæ q. s. fiat Ceratum.*

The while the *Intemperies* is removing, the Ulcer may be dressed with the milder Digestives, or with *unguent. basilicon* and *Præcipitate*; which is also a good Detergent and Sarcotick: or this; *R. thuris, mastich. sarcocollæ, an. 3j. ol. hyperici 3ij. terebinth. Ven. 3iss. ceræ albæ q. s. fiat Unguentum.* In the treating of these Ulcers, you are to be careful that your Application to the Ulcer be not too drying, lest you thereby bring the *Intemperies* again upon the Part. The Ulcer incured, you may proceed with *Epuloticks*, as hath been all along delivered.

Observat.
of an Ul-
cer with
dry Intem-
peries.

A Youth of about thirteen years of age was brought out of the Country, and lodged near me. He laboured under several Ulcers in his right Leg, one especially upon an *Exostosis* on the *Ossibia* on the inside near the Ankle. The Ulcer was large, and of an oval figure, the Lips pale, dry and thin, the Matter

Matter little and sanious, the Leg it self emaciated and squalid; which I supposed was by the weakness of the native heat from not using of the Limb. I caused his Leg to be bathed with warm water, and dressed the Ulcers with *unguent. basilicon* and *Præcipitate*, applying a Cerote over all of a mixture of *unguent. dialthææ, ol. ex pedibus bovinis*, and Wax: then rowled a soft Compress on it, to retain the Dressings on and keep it warm, and ordered his Diet as above said. The lesser Ulcers digested and cured by the ordinary Epuloticks; but the larger upon the *Exostosis* would not digest for three days together with any Medicaments: which gave me cause to suspect the Bone under it to be carious, and that I should be necessitated to lay it bare: but I could not by search of my Probe feel it. I continued to nourish the Part by bathing it with emollient Decoctions and Embrocations, with *ol. ex ped. bovinis*, and gave the Patient liberty to use his Leg by setting his Foot on the ground; by which it swelled, and became more humid. After some while, when I saw the temper of the Member alter, I ordered a laced Stocking to be put on, for that I could not with a Rowler make such a Compression so near the Ankle as I would, without causing a swelling in his Foot. I dressed it with Pledgits of Lint dipt in a Solution of Tincture of Vitriol in *aq. rubi*, and made the Compression over it; by which method the Ulcer cured with a firm *Cicatrix* upon that *Exostosis*. He went well cured out of my hands, and I suppose is well to this day. These kind of Ulcers are frequently seen in Hectical and emaciated Boodies and withered Limbs.

CHAP. IV.

Of Ulcers with Pain.

PAIN is also one of the Symptoms which interrupts the Cure of Ulcers, and affects the Part sometime after the Ulcer is cured, whence various Accidents are stirred up, as Fever, Watching, and a Prostration of spirits. Therefore it requireth our utmost endeavour speedily to remove or mitigate it.

The *Causes* of Pain are acrid sharp Humours corroding the Ulcer and Heat-*Causes* ing the Parts about; proceeding either from a repletion of evil Juices abounding in the Body, or through misapplication of Medicaments in Chirurgery, as not timely digesting the Ulcer, or from too long use of Abstersives.

The Complaint of the Patient will demonstrate the Pain and the Symptoms *signs* will shew the Cause; whether it arise from want of Digestion or Detention, the Matter will testifie.

The removing of the Pain requireth a right distinguishing of its original *Cure*. Cause. The Habit of body also to be considered, how it is in fault: and accordingly as there is *Plethora* or *Cacochymia*, you ought to make Evacuation by Purging, or Bleeding, or both, and use contempering Juleps, Opiats, and the like. Also the Patient's eating and drinking ought to be regulated proportionately.

These things premised, you are to apply your speedy endeavours to remove the Pain by proper Anodynes. If the Ulcer be sanious, it wants Digestion; and that is furthered by such Medicaments as have a temperate heat, as we have already shewed. The heat in the Parts about may be mitigated by Lenients, as is before said in *Tumours*, and after in *Wounds*, or by such like; as the Mucilages of *sem. cydon. psyllii, althææ*, extracted in *decoct. malvar.* and

far. bordei, croc. & vitell. ovi, axung. gallin. porcin. made into the form of a Cataplasm, or with Wax into a Cerote, or *ceratum Galeni*, or that with *populeon*: if more cooling be required, *unguent. nutritum, alb. camphorat. Emplastr. è bolo.*

If the Pain arise from hot acrid Humours fretting the Ulcer, it may be dressed with *unguent. diapompholygos*, or *unguent. è plumbo*, *unguent. tutia* simply, or mixed with *basilicon*, with a little Præcipitate, with Compress wrung out of *Oxycrate*, or red Wine, whereby the heat may be tempered, and the Part strengthened to resist the Influx, by which the Cure of the Ulcer may happily be affected.

If the Pain be caused by a fordid Matter sticking to the bottom of the Ulcer, and hindering transpiration, you cannot remove the Pain without Deterfives; of which *Merc. præcipitat.* is the best and mildest.

Pain is so familiar an attendant of Ulcers, as it is not easie to represent you any one without: but in complicated Ulcers it may not possibly be so easie to distinguish its cause, nor yet so directly to demonstrate the way of relieving it, as in a Simple Ulcer, where there is no other Symptom joyned with it. Amongst which I suppose it may appear most conspicuous in Fontanels; I therefore have chose to give you a few Instances of such, but shall begin with one arising from an Accident.

1. Obser-
vat.

A Person of about forty years of age, of a full and scorbutical Body, by some accident broke her Shin, and endeavoured the curing of it: but it daily growing more painful, and not to be endured, I was sent for, and, observing the Ulcer sanious, proposed Digestion as the only way to remove the Pain. I dressed the Ulcer with two parts of the common Digestive *ex terebinth.* and one part of *unguent. tutia mag.* spread upon a Pledgit. The Ulcer was of so exquisite sense, that it would scarce bear the Pledgit. I applied *unguent. alb. camphorat.* spread Emplaster-wise, with a Compress of soft Linen over it, and rowled it up from the Foot to the Gartering lightly, a little to restrain the Influx. This method I continued three days, by which the Ulcer was pretty well digested, and less painful; but the Leg was subject to Fluxion: and I doubted how it would cure so suddenly as was expected without the help of a more steady Bandage, meaning a laced Stocking. But she replied they had alway made her sick. I then proposed Purging. To which she objected the want of convenience. I continued the dressing of the Ulcer as before, till it was digested well; then I dressed it with Pledgits dipt in *aq. calcis* overthwart the ends of the Ulcer, with a Pledgit of *unguent. tutia* in the middle, to cicatrize it from the end, and applied *unguent. desiccativ. rub.* over them as an Emplaster, then rowled it up; by which it cicatrized in a few days. After the Patient saw her self so suddenly cured, she became well inclined to have a laced Stocking put upon that Leg, and, finding no inconvenience by it, bespake another for the other, and returned well satisfied to her house in the Country.

2. Obser-
vat. of
Pain from
Sordes.

Some months after this Person being again in the Town was grievously pained with a Fontanel in her left Arm, which she had kept for the space of eight years; but now, not being able to ease her self by the usual method, she threw out the two Pease, and endeavoured to cure it: but it became more painful, and would not heal. I, being sent for, observed the Ulcer to retain the form the Pease had given it, by reason of a grayish viscid fordid Matter that covered the bottom and sides thereof. This hindered the Transpiration, and stirred up a great heat about and in the Ulcer: the Lips grew turgid with the anguish, and so painful that she could not endure the wiping the thin *Ichor* from it with a soft Rugin with her own hand.

This

This Ulcer required Deterfion, and the best Anodyne had been to have filled it with Præcipitate, and to have applied Lenients over it. But her complaints put me upon the dressing it with such Medicaments as she had least apprehension of, which were *unguent. basilicon* with Præcipitate upon a Doffil, which I laid in the Ulcer lightly with Pledgits of *unguent. diapomphol.* over the Lips, and *unguent. album* over all; she fastning a Cloth over it, according as it would bear. She then complained grievously of the pain she felt by the Doffil in the Ulcer, and was, as she told me next morning, in a Fever all that night. I continued the same Dressings, only applied *Emplastr. è bolo* over all that Part near the Ulcer, which remitted the heat and pain thereabout; but the Ulcer was excessive painful for the space of two hours after dressing: yet the Lips of the Ulcer had cast off part of the *Sordes*, and the Ulcer it self looked better after three or four days Dressings. The Parts without were so well tempered, that she could bear a Compress and Bandage: but the Pain in the Ulcer continued for some hours after dressing, and returning again in the evening, lasted a great part of the night. Upon which consideration I desired her to give me leave to dress it with Præcipitate, assuring her ease from it. She permitting me, I dipped my Doffil in the Præcipitate, and sprinkled some of it where the *Sordes* was thickest. I then applied my Doffil over it, and a Pledgit with *unguent. diapomphol.* over that, with Emplaster and Bandage, as before, and resolved not to open it again till the third day after; but was called the next morning, and informed by her self, that she had been much easier since the dressing: and indeed at the next dressing I found a Slough come away with the Dressings, which was the *Sordes*. I dressed it with *unguent. basilicon* and Præcipitate mixed as at first, with the other Applications and Bandage; and the second day after dressing it again, and finding it well digested, and free from Pain, I put an Orange-Pea in the Ulcer, and continued it as a Fontanel with much ease.

Thus in scorbutically-habited ill Bodies, abounding with *Cacoehymia*, we frequently see these simple Ulcers afflicted with sharp Humours, which corrode them, and render them painful sordid Ulcers; which, if not timely relieved by Deterfives and Lenients, do terminate in putrefactive Ulcers.

A Person of Honour of about thirty six years of age, labouring under sharp Humours, was ordered a Fontanel in her Thigh, which a Chirurgion made and fitted with an Orange-Pea. It grew very painful; but the Patient, supposing it should be so, endured it so long till she could not stand with it. I was sent for, and saw the Thigh much swelled and heated with the excessive Pain, and the Ulcer covered with a brown *Sordes*, and a quantity of a thin Gleet issuing from it. I threw out the Pea, fomented the affected Part and Ulcer with Wine, filled the Ulcer with *Merc. præcipitat.* and applied *unguent. tutia* with Pledgits over it, with *Emplastr. è bolo* over all, rowling it up, and advising her to keep her Chamber and Pallet. The third day after I dressed her again: the Slough came in part away. I dressed it up again as before; and the third day after found the Ulcer digested. The pain mitigated the first night, and the heat went off the next dressing. I healed this Fontanel in few days, and made her one in her Arm.

But in such indisposed Bodies pain doth not affect the Ulcers only, but the parts also where they have been, after they are cured.

A Maid of about thirty five years of age of a scorbutick Habit of body had an Issue made in her left Arm, which was continued running many years; but at length, whether through negligence, or from some other reason, she suffered it to dry up. The Winter following she grew very much out of order by reason of a great complication of ill Symptoms, of which the most important

was

3. Observation.
of
Pain from
Putrefaction.

4. Observation.

was an intolerable pain in that Arm and place where her Issue had formerly been. After various courses of Physick and external applications, she was in some measure relieved, and was pretty free all the following Summer: but in the Winter, viz. 1672. her pain returned with such violence, as to afflict not only the place of the Issue with such pains, that she likened it to the cutting off of the Arm, but it stretched it self a while after to the whole Arm, Shoulder, yea the very Side it self; so that many Attempts being made, the Chirurgeons in the Country opened two Issues on each side of the seat of the old one. Many other things were done, till at last she came into my hands. Doctor *Walter Needham* was her Physician, and upon examination found her afflicted with a *Rheumatismus*, for which he instituted a convenient course, and judged withal that the Pain of the Part was from the usual way Nature had taken to the old Issue, whither the sharp Humours making their passage, and finding no vent, did disperse themselves through all the branches of the Axillary Artery on that side, viz. to the Scapulary and Thoracick branches, &c. the Pain being every where found according to the places of their distribution.

To the Cure of this, besides what was inwardly administered, it was thought requisite to eat down deep by a Caustick into the place where the old Issue had been, and thereby to divide the Fibres of the Membrane of the *Biceps*, which lay just under it, and seemed to be the place of the principal Pain. When this was done, we divided the Escar, and cut it out, then filled the Opening with *Præcipitate*, and applied a Pledgit of *unguent. basilicon* with *ol. liliorum* upon it, and dressed it up. We dressed it every other day, till the remaining Escar and Slough separated; then we incarned and cicatrized the Ulcer even. From the time of the Opening this her Pain ceased, and she was well of that, but laboured under a *Rheumatismus* in great measure, it swelling her Thighs, Leg, Hips, and lower Belly: but by frequent Phlebotomy, Purg- ing, and other Prescriptions, she was by my said Friend happily cured.

CHAP. V.

Of Ulcers with Fluxion.

BUT it rarely happens that Pain afflicts an Ulcer without Afflux of Humours: we shall therefore say somewhat of that, it being a great cause of the difficulty we meet with in the Cure of Ulcers.

Cause. What the Causes of Fluxion are, hath been delivered when I treated of *Tumours in general*, viz. the Part mittent, and Part recipient: That vicious Humours peccant in quantity and quality are either thrust forth by the Part mittent, through the strength of Nature; or attracted by the Part recipient, by reason of heat or pain; or are moved to it by reason of its weakness, or low situation, which rendreth the descent of the Humours more easie.

Signs. An Ulcer with Afflux of Humours is discerned by the tumefaction of the Lips and Parts about it; and from the abundance of excrementitious Humours flowing from the Ulcer. It is also accompanied with Inflammation proportionably to the quality of the Humours.

Prognostick. All Ulcers with Fluxion are of difficult Cure, the Ulcers being thereby rendered lax and indisposed with Pain, Tumour, &c. and by how much the greater the Influx of Humour is, so much the more difficult is the Cure.

Cure. In the Cure of this Ulcer, the Cause of the Fluxion is to be enquired into; whether it proceedeth from Humours peccant in quantity or quality, thrust forth

forth by the part mittent upon the inferiour weak parts, or that it was attracted to it by reason of heat or pain. If Heat was the Cause, that must be removed as hath been said in the Chapter of a *Hot Intemperies*. If Pain was the Cause, you must endeavour to mitigate that by Lenients, as hath been shewed in the preceding Chapter. If Plenitude be the Cause, a slender Diet ought to be prescribed, and Vænesection if nothing hinders, and the Body kept soluble by Clysters and the like.

If the Humours offend by reason of their equal quality, Purgatives are proper, according to the quality of the Humour: and if they be too fluid, they must be incrassated and contempered by Alteratives, as Endive, Succory, Sorrel, Purslane, Lettice, in Broths; also Barly-cream, Emulsions, Violets, Citron, Rasberries, and the like: and the Humour flowing to the weak Part may be averted by Revulsion, Interception, and Repulsion. What they are, and where they ought to be applied, you may see more particular in the Treatise of *Tumours in general*.

The Medicaments proper to strengthen the weak part, and resist the Influx, ought to be of a cold and astringent quality; as *fol. plantag. polygon. summit. rubi, equiseti, cort. ulmi, flor. ros. rub. bacc. myrtill. balaustr. nuc. gland. querc. cypress. gallar*. Some of these may be juiced, others powdered and mixt with Unguents, or boiled in *Oxycrate*, or red Wine, and applied with Stupes to the Part. In great Fluxion and in strong Bodies *aq. aluminis* and *aq. calcis* may be of use; to the latter of which may be added a few grains of Sublimate.

The Unguents may be *unguent. nutritum, alb. camphorat, unguent. desiccativ. rub. cerat. Galeni, Emplastr. de minio è bolo, &c.* But forasmuch as these Ulcers are frequently disturbed by sharp Humours impacted in the Pores, which cannot be repelled, and by their acrimony may stir up Pain and Inflammation; you shall therefore have regard to the Ulcer, to digest and deterge it, while you outwardly resist the Influx upon the Parts about it, and let your Detergents be such as are more drying than in simple Ulcers, but with little acrimony: of which sort you may find choice set down in the Chapter of the *Moist Intemperies*, to which I refer you. The Ulcer deterged, you may incarn with such like: *R. terebinth. Venet. ʒij. sevi vaccini ʒi. plumb. usti ʒvj. tutie præpar. corn. cerv. usti, an. ʒij. Misc.* To which may be added, *thus, sarcocolla, resina pin. &c.* For in the dressing of Ulcers the proportioning of Medicaments ought to be left to the discretion of the Chirurgion, avoiding greasie Applications in these Ulcers as much as may be. The Ulcer incarned, you may proceed by Epuloticks, as hath been all along shewed.

A Maid-servant living in a Noble Family had cut the inside of her right Leg by a Fall upon a hot Grate-iron, and, having suffered about eight Weeks under ill Chirurgery, was commended to my care. The Ulcer was with loss of substance and sanious, with some pituitous Swelling in the Lips and Parts about it. I dressed it with *unguent. basilicon* mixed with Precipitate, as it is usually in my Salvatory, ʒj. of it to one ounce of the Unguent. I applied over it an *Emplastr. diachalcit.* sprinked with a little *acetum*, and a Compress wrung out of *Oxycrate*, then rowled it up with the expulsive Bandage; the Cure indeed consisting mainly in the well rowling, the want of that causing frequently Cruditie in the Ulcer. By the use of it both the Influx was restrained, and the Member strengthened, and with the help of the Unguent aforesaid it was digested: as the Lips flatted by virtue of Compression, it incarned, and by *unguent. tutie* and Pledgits dipt in *aq. calcis* cicatrized in few days, without Purging or Bleeding.

1. Observat. of an Ulcer with Fluxion.

A Man

2. Observat.

A Man about fifty years old, of a gross Body, frequently afflicted with the Gout, and labouring then under it in his left Leg, (as I remember) was commended to an Empirick, who pretended extraordinary skill in the Cure of that Disease, but understood no more than what he had learned by Books. The Patient's Leg was much swelled with pituitous Humours, as most fat Bodies are that have long laboured under the Gout, and no Medicaments or Bandage were used to fortifie the weak Member. He began the Cure by Purging, and then proceeded by bathing his Leg in a Tub with some Decoction of Herbs, &c. The Bath might possibly be good; but the putting his Leg into it as it seemed, served but to lead the Humours more powerfully down to it and increased the Swelling. Whereupon he was again purged by strong Catharticks, it was supposed *Lockyer's Pills*: he was also frequently vomited as roughly; but without success, the Gout continuing, and the Leg growing more weak and swelled. Endeavours were used by Emplaisters of various sorts, and Purgatives repeated, till the Patient's spirits and strength were near exhausted, the Empirick confidently promising a Cure thereby. But the Patient not able longer to endure his Applications, I was sent for, and found him extremely weak; and complaining much of Pain. I took an Emplaster off his Leg, I suppose *Emplastr. de ranis cum Mercurio*, or some Solution of Mercury with Gums; it was spread thick upon Leather, and lay in great wrinkles about the whole Leg: under it was great Excoriation, with Tumour and Inflammation. I caused some Water to be warmed, and while it was held over a Vessel my Servant bathed it with a Sponge, to cleanse it, and give a breathing to the Humour. I then dressed the Ulceration with *unguent. tutiæ*, and applied *ceratum refrigerans Galeni*, cut into pieces, to give way for the discharge of the Humour, and rowled the Leg from the Foot to the Knee. After I had continued this method of dressing a few days, mitigated the pain, and digested the Ulceration, I left of the use of the Cerote, dressed the Ulcer with *unguent. desiccativ. rubr.* applied *unguent. nutritum* over all, then rowled the Member more strictly, and thereby cicatrized the Ulceration, and he was free from the Gout. I ordered him a laced Stocking, and by moderate and equal lacing it restored the Leg to a better shape than it had been in many years before, and left him well recruited in his strength: forwarning him again to trust such Braggers.

3. Observat.

A Servant to a Nobleman in the Country, by a Fall upon a sharp piece of Timber, bruised and cut his Leg from the Shin-bone transverse the outside of the Calf of his Leg. Through neglect in the Country it inflamed and swelled very much, and the Ulcer became undigested. He was sent up to Town, and lodged near me. I fomented the Part affected with Wine, dressed the Ulcer *cum terebinth. vitell. ovi & far. bordei*, applied *Emplastr. è bolo*, with a Compress wrung out of the said Fomentation, and rowled it up; then let him blood. The next day I fomented his Leg with a Decoction of some of the Simples above mentioned, dressed his Ulcer as before, and applied an Emplaster of *farina fabarum, pulv. ros. rubr. balauft. bacc. myrtill. sumdch.* decocted in Wine, adding some *mel commune* to it. Thus in few days the Ulcer digested, and the Tumour wasted. Then I deterged with the same Digestive, adding *pulv. rad. aristoloch. ireos, sarcocoll. & mel. ros.* touching the Ulcer with the Vitriol-stone daily more or less, and applied *Emplastr. è bolo* as at first; then by a more strict Bandage disposed the Lips of the Ulcer to incarn; and by *unguent. è plumbo & desiccativ. rub.* I cicatrized it, and directed him a laced Stocking to be put on, and returned him to his Lord.

CHAP. VI.

Of Ulcers with Hyperfarcosis.

TH E arising of luxurious Flesh in Ulcers, sometimes createth a difficulty in their Cure.

The Cause is either from abundance of serous Humours flowing into them ; or the ignorance of the Chirurgeon, in not distinguishing the superfluous Flesh from the good, who thereupon continueth the use of mild Detergents or drying Medicaments.

The Signs are so evident, that they need no Remarks.

The Indication of Cure is taken from the Cause. If Fluxion were the Cause, Purging and Bleeding may do good, and a regulation of Diet, with the use of such Remedies as may resist the Fluxion ; as you may see in the preceding Chapter. But if too mild Detergents or Sarcoticks caused the Flesh to grow lax and spongy, then more powerful Driers are required, yea, cathartick or caustick Medicaments, as you see cause.

The milder are, *spong. ust. cort. granat. nuc. gallar. lapis tutiæ, alumen ustum* ; and amongst them *Merc. præcipitat.* may well be reckoned, if used alone. Compounds are these : *℞ nuc. gallar. cort. granat. an. ʒij. balauft. ʒj. aluminis ust. ʒj. pulv. subtil. Misc.* It may be sprinkled on the Ulcer thick, and dry Pledgits with Compress bound over it ; or it may be boiled in red Wine, and Pledgits dipt in it and applied. *Aq. chalcis* is also moderately drying without pain : if you add a few grains of Sublimate, it is more powerful. *Aq. lapidis medicamentos. aq. viridis, & Fallopii,* are more strong ; but by the addition of *aq. plantag.* or the like, they may be made milder. The Vitriol and Alumestone serve well to this purpose, to keep down loose Flesh, and to cicatrize those Ulcers which are most luxurious ; and if they be discreetly used, will perform the work with little pain, and cicatrize these kind of Ulcers most firmly.

A Gentleman of about twenty years old, of a good habit of Body, put himself into my hands for the Cure of an Ulcer on his right Side, the breadth of the Palm of an Hand. It was occasion'd by a Burn, and had been bigger. The cause why this remaining part of the Ulcer did not cicatrize was most evident, it being over-grown with loose Flesh. I applied Pledgits of a mixture of *unguent. basilicon*, with two parts of *Ægyptiac.* upon it, with Bandage : but observing it not to yield to that so soon as I designed, I levell'd it with the Caustick-stone, and after separation of the Escar, digested the Ulcer with *unguent. basilicon* and *Merc. præcipitat.* and afterwards cicatrized it with some of the Waters above-mention'd.

Observat.
of an Ul-
cer with
loose
Flesh.

CH A P. VII.

Of Ulcers with Caries in the Bones.

A *CARIES*, or Rottenness in the Bone, is frequently found in Ulcers, and sometimes giveth rise to them : but however it is, it always prolongeth and rendreth the Cure of them difficult.

Causes.

The *Causes* of *Caries* in the Bones are either internal, as through retention or acrimony of the Matter, or some occult quality, as in *Lues Venerea*, where the Bone is carious, and the Skin is whole ; or in strumous Ulcers near the Bones, where the Erosion begins in the Bone it self : or they are corrupted externally by the Air. Bruises, Wounds in the Head, through ill Chirurgery, may corrupt both Tables, &c. But this I never met with in any Patient of my own, or where I had power to govern. The Bone may also be foul'd by over-sharp Medicaments.

Signs.

If the Bone be bare, its Corruption is easily discerned, though sometimes it be covered with a grumous or viscous Matter ; which rubb'd off, the Bone appeareth white, brown, or black. If the white be porey, the *Caries* may be deeper and more dangerous than if it were black and hard. If the Bone lie so hid as that you cannot feel it with your Probe, yet you may judge it carious from the quantity or quality of the Matter. If the Bone lie near, and the Flesh lax and white, it is shrewdly suspicious that the Bone is carious : but if the Matter stink or be oily, it is a more certain sign of a Rottenness. Ulcers of long continuance near a Bone do also foreshew a *Caries*, according to *Hippocrates* ; *Si Ulcera annua aut etiam diuturniora fiant, ossa corrumpi necesse est*. Also the difficulty in cicatrizing them, and the frequent and sudden Eruption of them after they are cured, giveth a suspicion of a foul Bone. But if the Bone be much corrupted, the Matter is foetid, and the Probe will penetrate into it.

Prognostick.

Ulcers with *Caries* or Rottenness in the Bones are of difficult Cure, and reckoned amongst the Cacoethe and malign Ulcers ; but are more or less dangerous where the great Joints or heads of the Bones are affected, where the Chirurgeon cannot safely apply such Remedies as are proper for Exfoliation.

Cure.

In the Cure of Ulcers with *Caries* a good Diet is to be observed, and the peccant Humours to be evacuated and averted by Bleeding, Purging, &c. lest they cause Fluxion. And forasmuch as in the Cure of these Ulcers the corrupt Bones must be first removed, and a *Callus* generated, before you can hope for Sanation, therefore you must in the first place make way to the Bone, that, if it be possible, you may have it in your sight. To which purpose, if the outward Orifice be small, you must enlarge it proportionably according as the *Caries* is greater or lesser, and scrape the rotten Flesh away, or consume it by *Escaroticks*. But if by reason of the nervous and great Vessels, as in the Hands, Feet, and in the great Joints or Spine, you cannot safely do it, you shall then, by prepared Sponge, Gentian-roots, or the like, dilate the Ulcer till the *Caries* be bared. But if the *Caries* lie just under some considerable Nerve, Tendon or Artery, so that you cannot well come to apply your Medicaments to the Bone ; you are then to consider whether the *Caries* can be removed without laying the Bone more bare : and if that be not feasible, you are then to consider the prejudice may happen to the Patient in the cutting off those Vessels ; and, comparing the Worthiness of them with the Inconveniences which may happen to the Patient from the *Caries*, proceed accordingly.

The

The Bone laid bare, you are then to consider the *Caries*, whether great or small, deep or superficial, hard or soft; and proceed by Medicaments or Manual Operation accordingly. The Bones of the Head do not admit of the hot Iron, nor need it. The *Vertebrae* of the Back will neither admit of Cauteries, Rugin, or sharp Medicaments, the Spine of them excepted: nor will the *Sternum* or Rib admit of the Cautey. The Heel-bone requires also great caution, for that it is soft, and rarely exfoliates by rough handling. In the rest you may proceed by Cautey, Actual or Potential, Rugin, or otherwise.

If the *Caries* be superficial, and the Bone firm, you may by Medicaments of a moderate drying quality consume the moisture in the *Caries*, and thereby dry the Bone, and dispose it by virtue of its ossifick faculty to thrust out a *Callus*, and make separation of its *Caries*.

The milder sort are, *rad. ireos, peucedanum, rad. aristoloch. myrrha, aloe, cort. pin. and spir. vini.*

The stronger are, *euphorbium, unguent. Ægyptiac. ol. garyophyll. spir. vitriol. sulphur. pastill. Andronis, Masæ, polyid.* But these require to be used with caution, and the sound Parts to be well defended from their acrimony.

The Powders above-mention'd may be applied upon the Bone with Dossils of Lint over them, to keep the lips of the Ulcer distended; or may be mixed with *syr. de ros. sic. aut mel. rosat. vel commun.* or used in a spirit of Wine, or with *unguent. Ægyptiac.* Or thus in the form of Injections: *R symphit. maj. gentian. aristoloch. rot. & long. rad. ireos, an. ʒj. flor. ros. rub. sumach, balaust. an ʒss. coq. in vin. alb. ad ʒij. colatura adde spir. vini ʒij. mell. ros. aut Ægyptiac. q. s.* Where you can safely dilate the Ulcer, you ought to do it, and keep the Bone bare and dry, by filling it up with Dossils, that the Lips of the Ulcer encroach not upon your work, lest the Matter dropping from thence corrupt the sound Bone under them: for to exfoliate well, it should begin to rise from the sound edges.

The spongy Bones in the Hands or Feet are to be kept bare by Dossils, according to the length of the *Caries*: and if the whole Bone be corrupt, it will dry and separate from the Joints in time, and the Ulcer happily cure; yet, to hasten it, you may dry it with an actual Cautey. But if the Bone be only carious in one part, as in the middle or at the end, to hasten the Cure you may nip it there in pieces with a pair of Pincers, pull away the broken bits, and dress it lightly with some of the above milder Driers; whereby in few days the *Caries* will cast forth, a *Callus* thrust out, and unite the two ends, as in fractured Bones, if the Native Heat of the Part be preserved the while.

But if the *Caries* be in the great Bones, and lie deep, and be subject to the inflowing of Matter; your speediest way will be by Manual Operation, *viz.* either by Rugins or actual Cautey. If you can come easily to the Bone to scrape it, as in the *Cranium*, that way will be most proper. You are to scrape till you find it firm, or that you discern a ruddiness in the Bone; and not only till it look white, for that is the natural colour of the outer Shell of the Bone: yet in some it is frequently found porey and carious while it retains that colour; and if you do not rugin that away, the *Callus* will be slow in thrusting out; and if you do rugin it, the deeper you enter into it, the browner and softer the Bone will be. Therefore you must be cautious in this Work, lest you penetrate to the Marrow of the Bone, when possibly you needed not have taken away more than the external Shell of it.

The Bone rugined, dress it up with the milder Sarcoticks: or, if you had rather use an Unguent, *R terebinth. claræ ʒiv. gum. elemi ʒij. resin. pineæ, mastich. an. ʒvi. thuris, sarcocolla, an. ʒiij. Mis. super ignem.* Apply this warm upon Lint, and in few days you may see the Flesh thrust forth in small grains,

which is *Callus*, and in few days more thrust off small Speels from the Bone you scraped.

But if the *Caries* be so deep that you cannot rugine it, then with a *Terebellum* make penetration into it to the sound Part, or by an actual Cautery consume the Rottenness. In order to this work, if the Ulcer be narrow, you are to pass it through a *Cannula* fitted to go down through the Ulcer to the Bone: which *Cannula* or Pipe ought to be covered with an Emplaister, or Linen starched on, and oiled, to pass in more easily. Then having a Basin of Water ready to cool the Pipe, you shall place the *Cannula* upon the carious Bone, having first cleansed the Matter from it with armed Probes: then pass the actual Cautery down through the *Cannula* to the Bone so often till you have dried it, pulling out the *Cannula* after each heat. So you may perform the work without scorching the lips of the Ulcer.

According as the Bone is rotten, so the Humour will spurt out from it upon the first application of the Cautery: but upon repeating it, that Bone will be so dry that you shall not hear it hiss; besides, you may feel the Bone firm. Then dress it with the White of Eggs beaten with the Mucilage of Quince-seeds extracted in *aq. germ. querc.* or the like, and dress the scorched Ulcer and Lips with *unguent. refriger. Galeni*, and a Cerote of the same over that and the neighbouring Parts. Continue this way of dressing till the heat of the Ulcer be mitigated: then, if the Lips be vesicated, dress them with *unguent. album, rutia*, or the like, and the Bone with the milder Exfoliatives, and keep the Ulcer open till the burnt Bone cast off; then throw out the Dossils, and you shall see the Ulcer incarn and cicatrize by the most familiar Epuloticks.

1. Obser-
vat.

IN the year 1692, passing from *Cheshire* into the County of *Rutland*, taking *North-Luffenham* in my way to *London*, I was desired there to visit a Freeholder, who had laboured under a Fever, and had been long Bed-rid by reason of a grievous pain in his right Thigh, which was supposed the *Crisis* of that Fever. I saw him much emaciated, and his pained Thigh was somewhat the bigger of the two, but it retained its shape without any visible Tumour, Inflammation or Hardness; nor was the Fluctuation so distinguishable as that I could positively say there was Matter, it lying so deep and equally in the outside of it: but, suspecting Matter, I opened it on the outside according to the length of the Member, and feeling my Knife in the Cavity, I made the Apertion large, and discharged a putrid Matter like the Lees of Beer. After I had discharged a Porrenger-full, I dressed the Opening *cum unguent. basilic.* upon a Tent, with an Emplaister *de minio* over it, and with Compress and Bandage rowled it up. The next day, finding the Patient relieved, and the Matter plentifully discharged, I fomented the Tumour with a Decoction of *absinth. flor. cham. ros. rubr.* and such-like; and making a search with my Probe, found the Bone bare a great length. I enlarged the Opening, to make more way for the Matter, and the better to apply my Medicines to the Bone; then dressed it up as before, and against the next day made an Injection *summitat. hyperici, centaurii, rad. consolid. maj. bistort. tormentill. gentian. ireos*: to which strained liquor I added *syr. de ros. siccis*, and cast some of it daily in warm to deterge the Ulcer. His Body was kept soluble by Clysters of Milk and Sugar, and his Spirits relieved by a morsel of *theriac. Lond.* with *conf. lujulæ*. I also ordered him a Julep made with a few Strawberry-leaves and roots, a little Ivory, and a crust of Bread, infused a stick of Cinnamon in the strained Decoction, put in a few drops of *spir. sulphur.* and sweetned it with Sugar. His Diet was Oatmeal-caudle, Broth, Grewels, and Eggs; and as his Appetite encreased, we allowed him a more liberal Diet. Although the Opening

was

was large, and the Thigh very bare of Flesh; yet, by reason of the distance the Bone lay from the Opening and the hollowness of the Ulcer, it was not possible to make any Applications to the Bone by Medicaments to exfoliate it, that should not be offensive to the Ulcer, if they were so powerfully drying as the Bone required. Therefore I caused an actual Cautery to be made at the next Smith's, and dried the Bone that way, and the while continued the above-said method of dressing, keeping the Orifice moderately dilated with Dossils press'd out of the Injection; then by good Compress and Bandage squeezed out the Matter, insomuch as it lessened daily, the more remote Cavities agglutinated, and the Ulcer was like to cure, if the *Caries* in the Bone did not obstruct it. That it might not, I got the Cautery made in the form of a Wedge, but thicker, to retain heat; and having fitted it with a *Cannula*, I placed it upon the Bone according to the length of the *Caries*, passed the Cautery through it to the Bone, and repeated it again and again, cooling the *Cannula* each time in a dish of water near me: then I covered the Bone, and dressed the Opening with Dossils dipt in a mucilage of Barley and Comfrey-roots, fastning a Thread to those Dossils which I conveyed first in towards the Bone, the better to bring them out again, and applied *unguent. refrigerans Galeni* outward upon the Ulcer, with an Emplaster of *cerat. Galeni* over all. This way of dressing I continued daily till the Excoriation was healed without: then I repeated the use of the former Injection, adding *flor. ros. rubr. balaust. sumach*, with a little *alumen*, and by Compress and Bandage hastned the union of it within, leaving the Exfoliation of the Bone to Nature. While I stay'd in that Country, the Cavity filled up, and by the well-digested and little Matter the Ulcer seemed near cured; and I was afterwards informed that the Patient followed his Husbandry some one or two months after. The Exfoliation was here insensible, as it most frequently happens, the Scales mouldering away, and discharging with the Matter.

A Gentleman of about forty years of age, having been long afflicted in the Country with Ulcers on his right Leg and Foot, came to *London*, and put himself into my hands. There was one large Ulcer upon the *Fibula* near the Ankle here and there superficially cicatrized. Upon search with a Probe, I found the Bone carious in several places, but covered with the Tendons of the *Pennis*. On the inside of the Leg upon the *Tibia* near the Ankle there were also Ulcers with *Caries*; the Foot was also ulcerated, and the Leg and Foot swelled. I began with the laying open of that Ulcer on the outside upon the *Fibula* by the application of a Caustick, and dividing the Escar took out some small pieces of Bones which lay loose in the Ulcer. The *Fibula* it self was covered with the Tendons of the Muscle *Peroneis*, so as there was no possibility of applying Medicaments to exfoliate the Bone, nor indeed of curing the Ulcer, whilst those Tendons lay in the way. Wherefore I cut them transversely; upon which division the upper part of them contracted, and then the *Fibula* appeared bare and black. I applied dry Lint upon the Bone, and dressed the Ulcer with *unguent. basilicon* hot, to hasten Digestion and separation of the Sloughs. The other Ulcers and Excoriations I dressed, some with Deterfives, and others with Epuloticks, according as they required; and with Compress and Bandage endeavoured to press out the pituitous Humours affecting those Parts. As the Escars began to separate, I deterged by the use of the Vitriol-stone and Precipitate, and dressed the Bone with Dossils pressed out of *tinctura vitrioli dulc.* of Felix Wurtz. The upper ends of the Tendons suffered Convulsion with great *tremor* upon the application or taking off Dressings; but it was without pain: yet, suspecting the worst, I cut as much off of the Tendons (with a pair of Scissors) as lay bare, then dipt them *cum oleo terebinth.* hot, and

2. Observat. of an Ulcer with *Caries* in the *Tibia* and *Fibula* of the right Leg.

and dressed them with Precipitate. By this way of dressing, the remaining ends of the Tendons digested and incarnated with the fleshy Parts, and by the application of Epuloticks cicatrized: so also the main Ulcer cicatrized round from the edges to the carious Bone, thrusting off the rotten edges of them before it. During this, I healed the Ulcers and Excoriations on his Foot; and by the help of a Laced-stockin press'd back the pituitous Humours, and reduced the Member to its true shape. Having thus happily succeeded, I began with the laying open the Ulcer upon the *Os tibiae* by Caustick; and in dividing the Sloughs, took out several fragments of Bones which lay entangled in the Flesh. After separation of the Escar, I deterged that Ulcer after the same manner as the former; and indeed, by rubbing the carious Bones with the Vitriol-stone I hastened the Exfoliation of them. They came away in bits at several times, but that of the *Fibula* was thrust off by the *Callus* underneath in one piece. After the Exfoliation of the Bones I purged the Patient with a cathartick Apozeme, and prescribed him a Decoction of *Sarsa*, &c. and soon after cicatrized the Ulcers; but advised him to continue the wearing of the Laced-stockin.

3. Observat. of an Ulcer with rotten Bones in the Hand.

A Young man, by some accident, bruised the Back of his Hand: it inflamed and apostemated; and after some while terminating in a sinuous Ulcer, and underneath corrupting the Bone, I was consulted, and advised the way of dressing it: but that Method not being observed, other Bones of the Hand became carious, and the Hand in great hazard of being lost. Upon which he was commended to my care. Sir *Alex. Fras.* being present, I took off the Dressings, made a search with a Probe, and felt the Bones leading to the two Middle-fingers bare, rough, and, as I suspected, rotten. The Orifice being small, I applied a Caustick large enough to make way for the taking out those Bones; then divided the Escar, and dressed up his Hand with Digestives, Emplaster and Bandage. Sir *Alex. Fras.* prescribed him a Vulnerary Decoction, and left the prosecution of the Cure to me. As the Escar separated, I saw the Bones leading to the two Middle-fingers black, and softened with Putrefaction. I laid hold on the one with my *Forceps*, and pinched it into pieces with much ease, bringing part of it away. I fomented the Hand with *decoct. absinth.* &c. in Wine, dissolved a little *Aegyptiac.* in some of it, washed the Ulcer, and applied a Dossil dipt hot in it upon the Bone, and *unguent. basilicon* over the Escar. I then pinched out what was most rotten, dressed the remaining ends of them with a mixture of *unguent. Aegyptiac. spirit. vini* and *extract. scordii* actually hot with an armed Probe, applied Pledgits of the same upon the Bones, rubb'd the loose Flesh in the Ulcer with a Vitriol-stone, and laid *unguent. diapomphol.* upon Pledgits over the tender edges of the Ulcer. By this way of dressing I deterg'd the Ulcer; and at several times pinching out those rotten Bones that led to the two Middle-fingers, disposed the rest to cast off. During which, I laid the Ulcer higher open to the Joint of the Middle-finger: which Knuckle I also found rotted to pieces, and took out what would come easily away; then dressed the remaining *Caries* as the other in the Hand, and after some time made a separation of the *Caries* there. Having the while digested and healed the Ulcer I first laid open, I also cicatrized this Part, and dismissed the Patient well cured, as I thought. But some while after he came to me again with a Tumour upon that Knuckle of the Middle-finger, from some remaining Splinter of a Bone. I laid it open, and took that out. While I was curing this, I observed a small Opening, with a Tumour near it as big as a small Hazel-nut, upon that part of the Bone which led to the Fore-finger. I opened this by Caustick, and, discovering part of the Bone black, pinched it off, and dressed the remaining end with *Aegyptiac.* scalding hot upon an armed Probe: I kept

I kept the Ulcer open with Dossils press'd out with *spir. vini* till I made separation of it, then cured this Ulcer also. And from that time, which is more than five years, he hath continued well, and his Hand is firm and strong; Nature having supplied that loss of Bones with *Callus*. But he beareth the Marks of the Disease, which will assert the truth of what is here delivered. You may see more of this Work in the Treatise of *Struma*.

An Officer of the KING's Regiment of Foot, of a sanguine and healthful Constitution, marching at the head of his Company in a hot Summer's day, heated his Blood, and was seized with a pain in one of his Teeth of the lower right Jaw. He sent for a Tooth-drawer, who pulling out the Tooth brake the *Alveoli* off from the Jaw according to the length of it. The Pain made great Fluxion, and required Evacuation and Revulsion by Bleeding, and the like. But this being omitted, and the Part affected not treated as it ought, the Pain encreased, the neighbouring Parts swelled and apostemated, and all his Teeth and part of the *Alveoli* cast off. After some weeks continuance in the Countrey, finding his Disease encrease upon him, he came to Town, and sent for me. That side of his Head, Face and Neck were extremely swelled outwardly, so was the Cheek and Tonfil within, and the fractured Bones hidden within the Tumour. Upon a pressure with my hand on the outside of his Cheek, seeing the Matter flow into his Mouth out of a small Opening near the farther part of that Jaw, I made a search with a Probe, and felt the Jaw bare. There was a necessity of laying that Orifice open, for the more easie discharging of the Matter: which being done, I employed my endeavours to take off the Fluxion and Fever he laboured under, let him bleed from that Arm ten ounces, prescribed Fomentations and Cataplasms to be applied outwardly to disperse the Tumour, and inwardly an Injection to deterge the Ulcer of *rad. ireos*, *tomentill. bistort. aristoloch.* with *syr. è rosis siccis*, and a little *spir. vini*; also a Gargle to wash his Mouth of *flor. ros. rubr. plantag. summitat. rubi*, &c. with *diamoron* and *spirit. vitrioli dulcificat.* Dr. Warner being consulted, he directed Anodyne-draughts, Cordial-Juleps, Emulsions, and Purgings Apozems. The *Cacochymia* thus evacuated, and the Humours contempered, we hoped the outward and inward Swellings and discharge of Matter would have lessened: but they not yielding one jot to our endeavours, I laid open the Cheek from the Orifice I had enlarged forward along the Bone, with intention to take it out; but it was so shut in, that I could by no means get it out, till with Watch-makers Files I cut through that Bone; then the ends thrust out into his Mouth. These I pulled out: they proved to be pieces of the *Alveoli*. Then I felt the Jaw it self arise: and, considering that if it was loose it must out, I passed the end of my Probe under it; whereupon it rose up, having been some while loose, and was only held down by the aforesaid *Alveoli*; which being removed, the Jaw came away without the least pain, or one drop of blood, he only crying out of his Ear, as if it had made a hole through there.

The Jaw being extracted, the side was ready to fall in: to prevent which, I caused the Patient to hold it stretch'd out with his fingers in his mouth, and a Looking-glass held before him, that he might the better see to keep it more exactly even, whilst I by agglutinative Powders *cum albumine ovi* made a Crust upon the outside; which with Pastboard wet in *aceto* applied over it fast close to it; and after it was dried kept that side of the Cheek firm, and by Bandage it continued so, he helping it as hath been above said. It also was somewhat stiffened by the hard Swelling which was in the Cheek.

To hasten the *Callus*, I gave him daily *osteocoll.* as I had read in *Fabr. Hildanus's Works*. Whilst his Chaps were thus bound up, I continued to wash his Mouth with the Decoction above-said injected often in a day with a Syringe;

a Syringe; by which means the Ulcer was cleansed and cured, and disposed to a *Callus*, which grew and hardened in less than twenty days so equal with the other, as without looking in his Mouth it could not be discerned.

CHAP. VIII.

Of Ulcers with Callous Lips, &c.

IT also frequently happens that *Ulcers* become Callous, Hard and Livid, and are thereby rendered difficult of Cure.

Cause. These Ulcers are generally annual, and through length of time contract this Callosity and Hardness with a Livid Colour. The *Causes* of these are the frequent defluxion of a hot *Serum*, which hath been condensed by the Air, or by over-cooling or drying Medicaments.

The *Signs* are evident from what hath been said of them.

Prognostick. The *Prognostick* of them, is, that the Ulcer cannot cure till the Callosity be removed: and if the Ulcer be of a round figure, that ought also to be changed.

Cure. In the *Cure* of this Ulcer you are to consider the Hardness of the Lips; for from what cause soever it ariseth, that must be removed, or depress'd, to cicatrize with the Ulcer; for no Ulcer skinneth well but from the edges. Therefore if the Lips be hard and callous in the Superficies, you shall endeavour by emollient and discutient Medicaments to soften them, and by good Compress and Bandage dispose them to cure, first, by a Fomentation of *rad. & fol. althææ, lilior. malvæ, sem. lini & sænugraci, flor. cham. melilot. sambuci*. By this you may also rarefie the condensed Blood, which maketh the lividity in the Parts about the Ulcer, and preventeth the generation of good Flesh. Then you may embrocate the indurated Lips with *unguent. dialthææ, ol. amygdal. dulc. ol. lilior. lumbricor.* and apply *cerat. æsypi, cerat. Galeni, Emplastr. è mucilag. diachyl. ireat.* or, if stronger be required, *Empl. de ranis cum Mercurio*, or a Plate of Lead rubb'd with Mercury, or a Paste of Ceruse or *calx lot.* made up with *axung. porcin.* and over this a good Compress and Bandage; of which sort the Laced-stockin is best for the Leg, which being well made, preserveth the other Parts from Fluxion, better than a Rowler doth. But if the edges of the Lips be inverted and callous, or the Ulcer be in such a place where you cannot make good Bandage, your best way then will be by Caustick or Knife to remove it, and then digest and heal the Lips even with the Ulcer.

1. Observat.

A Young-man of about eighteen years old, of an ill habit of Body, having laboured long under an Ulcer on the inside of the Ankle, of a round figure, with the Lips thick and callous, and the Parts about livid, put himself into my hands for Cure. There was in this case no hopes by Emollients or Bandage to flat the Lips so as to dispose them to cicatrize; therefore I rubb'd them with a Caustick-stone round, and dressed the Ulcer with *unguent. basilicon* and Precipitate, and applied *Emplastr. diachyl. ireat.* over all, with Compress and Bandage, designing to dispose the Lips to unite with the Ulcer. But the Escar separating slowly, the Lips skinned underneath, and disappointed me. Notwithstanding, the inverted Parts being removed with the *Callus* underneath, I made a Paste with *calx lota* and *axung. porcin.* and with good Compress forced the Lips even with the Ulcer, then united it with a smooth and firm *Cicatrix*.

A Maid

A Maid in *Fanchurch-street* labouring under such an Ulcer with livid callous Lips, but not inverted, I digested with *unguent. basilicon* and *Precipitate*, and fomented with a Decoction as above-mention'd; then applied *Emplastr. diachyl. ireat.* over the Parts about, and put on a Laced-stockin, with a Compress under it, thereby digesting the Ulcer, and flattening the Lips; incarning and cicatrizing it with *unguent. diapompholyg.* in less than three weeks, which had been more than three years the work of some Barber-chirurgeon. The speedy Cure of this, I imputed to the Laced-stockin, it performing all the Intentions necessary to the curing of many such-like Ulcers.

CHAP. IX.

Of Putrid Ulcers.

ULCEERS labouring under Fluxion of sharp acrid Humours, are (as I have elsewhere said) for the most part sordid. The *Sordes*, as it encreaseth in the Ulcer, rots the Flesh, renders the Ulcer putrid, and the Matter sordid.

The immediate Cause of these Ulcers, are gross viscid Humours heated in them by the Intemperies of the Part, whence they contract a malign quality; and corrupt. They also happen through the unseasonable application of lenient or greasie Medicaments, or by too powerful Detergents, which resolve the sound Flesh, and stir up a putrefactive Heat in the Ulcer, where the Humours become so sharp that they corrode the Parts about: whence they are sometimes deservedly call'd *Ulcerata serpentina* & *depaescentia*.

The preceding Causes are excrementitious gross Juices abounding in the Body from ill Diet, Air, &c. Malign Fevers are also the Cause, by transmitting their malignity outward.

The Sign of a sordid Ulcer, is a viscous tough Excrement sticking in it with great heat and pain. As the *Sordes* encreaseth, it changeth its colour, by reason of the suffocation of the Natural Heat, and the Ulcer corrupts; and the Matter stinks.

If from abundance of *Sordes* Transpiration be hindred, a corruption of the Part follows, and it terminates in a corrosive or putrid Ulcer: and if that Putrefaction be not check'd, a Gangrene and *Sphacelus* follows.

In the Cure of these Ulcers a good Diet is to be observed, with a regulation of the Non-naturals: the viscous Humours require to be purged, and Revulsion is to be made by Bleeding, and otherwise. Vulnerary Decoctions are also to be prescribed, to waste the excrementitious Humours. The Topicks or outward Medicaments are to be proportion'd according to the quality of the Ulcer. In sordid Ulcers made by too strong Detergents, *unguent. basilicon cum Merc. præcipitat.* *unguent. diapompholyg. mag.* be proper to dress the Ulcer with; and some cooling Unguent or Cerote, as *refrigerans Galeni*, may be applied over it, with a Compress wrung out of *Oxyerate*.

If the Ulcer became sordid by the use of Lenients, and be lined thick with the *Sordes*, doubt not to fill the Ulcer with Precipitate, and apply some mild Detergents on Pledgits of Lint over it, with a Compress wrung out as is prescribed in Humid Ulcers, and dress it not till the third day after: thereby the Pain will lessen, and the *Sordes* come away in a Slough. After which, digest the Ulcer till it look more fleshy and natural; then proceed with milder Medicaments, and incarn.

In the common sordid Ulcers, *unguent. basilicon* and *Precipitate*, ℞ij. to an ounce *mundif. Paracels.* with *alumen ust.* and *unguent. apostolor.* are proper Detergents.

If the Ulcer be putrid, wash it with a good *Lixivium* wherein *absinth. scor. dium*, &c. have been boiled; or with *spirit. vini* and *unguent. Egyptiac.* or sprinkle the Ulcer with *pulv. sine pari Joan. Ard.* or *pulv. troch. Andronis*, &c. and outwardly defend the Parts from Fluxion.

If the Ulcer be corrosive, and undermine the Lips, and render the Flesh soft and unfit for healing, dress it as shall be shewed in a *Phagedæna*.

But if the Putrefaction encrease, and the Ulcer tend to Mortification, treat it as is said in *Gangraena* and *Sphacelus*.

1. Obser-
vat. of
Putrid Ul-
cers.

A Woman of about forty years of age, scorbutically and hydropically affected, having long laboured under a sordid Ulcer, in the Country, on the inside of her Leg, with great pain, came at last to Town, and put her self into my hands. The Ulcer was large and deep, with great putrefaction; the Leg was much swelled, inflamed, and had been excoriated in the Parts about by the acrimony of the Matter; and by the application of *Nutritum*, or such-like, the Matter was crusted in, and also an *Hypersarcosis* was risen underneath very large. I fomented the Parts affected with Wine, and washed the Ulcer with *spirit. vini* and *unguent. Egyptiac.* then with a *Spatula* thrust out the putrid Flesh, and strewed the Ulcer with *Precipitate*, dressing it with Pledgits press'd out of the same Solution, and applying an *Emplastr. diachalcit.* over it, with Compress and Bandage. The next morning I took off the Bandage and Emplaster, fomented the Ulcer with a *Lixivium* as above-mention'd, applied *mundif. Paracels. cum oleo terebinth.* on the Ulcer, and a Cataplasm *ex far. fabar.* with *oxymel.* and rowled it up as before, causing her to keep her bed. The day after, I purged her with an Infusion of *Sena*, &c. *cum syr. de spina cervin.* & *de ros. sol.* and prescribed her a *Decoct. farsæ, lign. guaiaci*, with Antiscorbuticks. Having by the Dressings abovesaid removed the Putrefaction, I endeavoured to incarn with the sarcotick Unguent, and applied *cerat. oxelai* over it, with good Bandage: but it would neither deterge, nor incarn, nor yet digest, for two days, till I put on a Laced-stockin; by the use whereof the Influx was restrained, and the Lips pressed down. Having disposed the Ulcer to a healing condition, I incarned it with the foresaid Unguent of *mel despumat.* mixed with sarcotick Powders. While I was doing that, I rubb'd part of the Lips which were callous with a Caustick-stone, and also rubb'd the *Hypersarcosis* off by some of the same Caustick. After separation of the Escars, I cicatrized the Ulcer and neighbouring Ulcerations with Epuloticks, then made her a Fontanel in the other Leg, and returned her into the Country cured.

2. Obser-
vat.

A Maid of a gross full Body, aged about twenty-three years, wanting her natural Evacuations, an abscess thrust out on the inside of the Calf of her left Leg, and terminated in a callous sordid Ulcer. After some endeavours ineffectual in the Country, she was sent up to London, and commended into my hands by Sir Fr. Prujean. The Ulcer was large and deep. I dressed it with *unguent. Egyptiacum, basilicon*, and *Emplastr. diachalcit.* with a Compress dipt in red Wine, rowling it up from the Foot to the Knee. The Physician began with the direction of a Purging-draught; and the second day after, I let her blood. She was also prescribed the *Decoct. traumat. Londinens.* and once a week purged with *pulv. cornachin.* I furthered the Deterfion of the Ulcer by rubbing it with the Vitriol-stone, and afterwards digested it, and endeavoured to incarn with Sarcoticks, as in the former Observation: but on a sudden, without any cause, the Matter became sanious, and flowed in great quantity.

I then

I then dressed the Ulcer with *pulv. Andronis* mix'd with *unguent. basilicon*, fomented the Part with *summitat. absinth. centaurii, hyperici, flor. ros. rubr. bacc. myrtyllor. balauft.* decocted in Wine; and by Intercipients upon the Knee, and good Bandage, endeavoured to resist the Influx. Upon my complaint to the Patient and her Relations, of the difficulty I met with in the Cure, I perceived by them that the Ulcer had been frequently subject to such discharge. The Physician was again consulted, who concluded they were the *Menstrua* that thus periodically affected the Ulcer. She was again let blood, and purged, and put into a Chalybeate-course, a Fontanel was also made in her other Leg; during which, I proceeded again by Deterfives, *viz.* the Vitriol-stone, *Merc. precipitat.* alone, and with *mundificat. Paracelsi, &c.* and applied Defensatives, with Compress, and a Laced-stockin. By which method the Ulcer seemed a while well-disposed to incarn: but the *Menstrua* being still obstructed, the Ulcer became again distemper'd, and rendred all my endeavours fruitless.

I having spent some months in this work to little purpose, they grew weary of me, and were desirous to make use of an Empirick, who had seen it in my absence, and promised a speedier Cure. I gave way to the entertaining him; he also dressed the Ulcer after his way: but his endeavours proving also unsuccessful, they came to me again. I, finding the Leg much inflamed and swell'd, and more sordid, dressed the Ulcer with Detergents as above-said, applying *ceratum Galeni* over the diseased Parts, with Compress and Bandage as heretofore, and, by Sir Francis Prujean's leave, gave her a few grains of *Turbith mineral.* the next day, and it gave her four or five Vomits, and a Stool or two. The next day after, I fomented the Ulcer as at first, continued the use of the former Dressings, put her on a Laced-stockin, and repeated the use of the *Turbith* three or four times, avoiding Salivation. We also put her into a *Decoct. sarsæ, lign. guaiaci, &c.* and by this method incarned the Ulcer; and by a *malagma of calx lot.* beaten up with *axungia*, cicatrized it. By the continuing of the Laced-stockin she remained well; and after some Months those Evacuations came naturally down of themselves, which by no Art would be persuaded, and she remained well.

CHAP. X.

Of Phagedæna, Noma, Dysepulota.

BESIDES all the Difficulties we find in curing of Ulcers upon the fore-mention'd Accidents, there yet remain divers others which are not easily described, nor easily reconciled to the ancient Nomenclature of Ulcers; I mean those called *Annua, Phagedanica, Depascentia, Noma.* Out of which words that I may pick some sence, I shall referr them to two Heads.

One, of the Corrosive Ulcers, which from their corroding the neighbouring Parts, have obtained several names in the Greek and Latin; as *Phagedanica, Depascentia, and Noma:* all which depend upon an acrimony of the Humour.

The other are rather the effect of some continuance of an Ulcer, which after long *Intemperies* doth by degrees so weaken the tone of the Fibres, destroy the natural Balsam of the Part, and, by frequent Fluxion, induce Callosity, that the Disease groweth very hard of Cure; and when cured, is apt to break out again. These, from their continuance, are called *Annua*; from the evil-disposition of the Part, *Cacoethe*; from the hardness of cicatrizing, *Dysepulota*; from the re-

putation *Chiron* the Centaur had in Chirurgery, *Chironia*; and *Telephia*, from the hard fate of *Telephus*, whose Wound could not be cured but by the Spear that wounded him. These latter being insignificant names, not describing the nature of any Ulcer, I shall content my self only to have explained them in few words: but the former, namely, *Phagedæna*, or *Ulcus depascens*, *Nomæ* and *Dysepulota*, deserve further consideration, and are our present task.

Descrip-
tion.

Phagedæna strictly so called, is an Ulcer with swelled Lips, that eats the Flesh and neighbouring Parts in the bottom and edges of the Ulcer. It differs from *Herpes*, because that always begins in the Skin, with little moisture; this always affects the Flesh, and abounds with Matter.

Noma is a deep Ulcer that eats and spreads without Tumour, but hath a Rotteness and Putrefaction joined with it.

Diffe-
rences.

Both these are venomous malignant Ulcers, and both spread: but they differ, in that one hath Tumour, and no Putrefaction; and the other Putrefaction, and no Tumour.

Causes.

These Ulcers do all take their original from vicious Humours abounding in the Body. Whether they be simple Cholera, or a soft Phlegm mix'd with it, or that the Humours are made sharp and corrosive from a hot and dry *Intemperies* of the Part affected, I leave others to judge: but in Bodies abounding with *Cacochymia* it is frequently seen, that an *Herpes exedens* riseth in the Nose and Face from a small Wart or fiery Pustule, which being heated by scratching or picking with their Nails will terminate corrosive, and from an *Herpes exedens* become Phagedænic; and by a farther exasperating, cancerate; they differing but as the Humour becomes more or less fierce.

Signs.

The Signs are evident from what hath been delivered of them. Some take their original from Abscesses deep in the Flesh, others begin more shallow, and in time spread and eat, not only the Skin to the Flesh, but the Parts about, and dissolve the Flesh in the bottom of the Ulcer very sensibly.

Prognos-
tick.

All these kinds of corrosive eating Ulcers are accounted malign: but some are less malign than other. Those which arise in Venereal Diseases are in themselves difficult of Cure; but by reason of the Specificks that Disease hath for its help, they become easie. The others are extreme difficult, and do frequently terminate cancerous.

Cure.

In the Cure of these Ulcers a good Diet ought to be prescribed, to prohibit the encrease of sharp Humours. The Body is also to be purged, the Humours contempered, and the Matter to be diverted by Revulsion, Derivation and Interception, if it be possible. The virulent Humour affecting the Ulcer requires to be dried up, and the *Intemperies* to be corrected. But forasmuch as these Ulcers differ one from another in their corrosive quality, the Medicaments must accordingly vary. If the *Intemperies* be hot, and the Ulcer corrosive, your Applications are to be cold and dry, with some little astringency; as *unguent. tutiæ, è plumbo, de calce, & de lithargyro*. If these answer not expectation, you must proceed with more strong Medicaments. But by the authority of the Ancients you must scarifie these Ulcers, or some way provoke them to bleed, that the sharp Humours may thereby be discharged. Then wash them with some drying Medicaments, which may also restrain the Influx of the Humours; as *aq. calcis, æruginosa* or *aluminosa*, or a *Decoct. plantag. equiseti, rubi, flor. ros. rubr. balauft. nuc. cupres. gallar.* in a Chalybeate-water. After which, the Ulcer may be sprinkled with any of these; *pulv. tutiæ præparatæ, corn. cervi usti, pulv. ostreor. combust. cort. granat.* Or they may be made into Unguents, as thus; *℞ unguent. diapomphol. ʒij. bol. Armen. sang. dracon. balauft. an. ʒss. ol. ros. q. s. Misc.* a Compress being applied wet over all, wrung out of some astringent Decoction. The Ulcer thus dressed, is not

to be opened again in three or four days: for in these Ulcers the temperament of the Part is weak, and the frequent exposing it to the Air tendreth it more weak, and the Medicaments less effectual.

But if this Ulcer be with Rottenness and Putrefaction, you are to proceed with Detergents, as *unguent. Egyptiac. Merc. precipitat. pulv. Andronis, Musæ*, also Caustick and Actual Cautery. To these Applications Objections have been made; and, but a little above, Medicaments are by my self proposed drying without Erosion: but when those take no place, we proceed to stronger; and where there is Putrefaction, you will find use for the strongest sort of Medicaments, as the Actual Cautery, it not only serving to remove the corrosive Flesh, but to check the malignity; and strengthen the weak Part. But in case that will not be admitted of, you must proceed with the other, and the while defend the Parts about with Refrigerants; and after separation of the corrupt Flesh, treat it by Sarcoticks and Epuloticks, as hath been elsewhere said.

A Man aged sixty odd years, of a lean dry habit of Body, had a long time been troubled with an Ulcer on the inside of the Ankle on his right Leg: it had been often cured, but it broke out again soon after. I found the Ulcer sanious, the Parts about it swell'd and livid, and endeavoured to cure it by the common method set down in the general Cure of Ulcers; but it would not digest two days together. I then proposed a Laced-stockin: but he replied, there was no need, his Rowler kept off the Swelling. Observing him to be so very wise, I omitted my accustomed attendance: upon which he employed another, who found much difficulty in it. Whether he cured it or no, I do not know; but about half a year or more after, the Patient sent for me again. The Ulcer was undigested, and the flesh in it soft and rotten, of a florid colour, and the Parts about it as it were bruised; which proceeded from the frequent Fluxion, and unequal strict Bandage. I proposed a Laced-stockin, which he willingly permitted. Mean time I deterged the Ulcer with *Merc. precipitat.* applied Pledgits of *unguent. basilic. mag.* over it, with an Emplaister of *cerat. Galeni*, Compress and Bandage. The second day after, I fomented the Ulcer, and Parts affected, with a discutient and astringent Decoction, and digested it with *unguent. basilicon* and *Merc. precipitat.* After I had thus digested and deterged the Ulcer, and rarefied the impacted Humours in the adjacent Parts, I fomented it with *aq. calcis*, and applied Pledgits dipt in the same over the ends of the Ulcer, and dressed the middle with *unguent. de lithargyro*, applying an Emplaister of the same over all, with Compress, and laced on a Streight-stockin; by which the Fluxion was moderately restrained, and the Ulcer disposed to cicatrize: yet through the acrimony of the Humour, and the indisposition of the Lips and adjacent Parts, the work was not without some difficulty, the Matter being apt to shut in, and bring part of the *Cicatrix* with it. But it was cured in less than two months space; whereas without that Stokin it would scarce have cured in six months. It was usually painful after it had been cured by former methods, but was now free.

A Person of about fifty years of age, much subject to the Gout, having long laboured of a sore Leg, sent for me. There was one large Ulcer with callous Lips on the inside of the Small of his Leg, with an Ulceration down below the Ankle. This Leg had been formerly subject to puitous Swellings, wherein the endeavouring to resist the Influx had impacted the Matter, and made the Tumour scirrhus. The Ankle-joint was stiff, and the Knee as bad, by reason of a contraction in the Ham. Upon these considerations, the Sores were of difficult Cure. I dressed the larger Ulcer, which was sordid, with *Precipitate*

1. Observation of an Ulcer hard of Cure.

2. Observation of an Ulcer of hard cure.

capitate and *unguent. basilicon*; the lesser, with *unguent. è plumbo*, with Compress and Bandage; and against the next Dressing, provided a Fomentation of red-Wine with Stipticks, hoping that way to cicatrize the lesser Ulcers at least: but they would not cure so, for the indurated Parts required to be made soft, and the Matter to be dissolved first; but this was a hard task, while the Patient laboured under the Gout, or pain from the weakness and indisposition of the Parts. Therefore, having designed a Fomentation *ex rad. & fol. althææ, malvæ, parietariæ, sem. lini*, &c. I bathed the Leg as it was held over the Liquor, continued my Applications to the Ulcers, and applied *cerat. dialthææ* over the scirrhus Parts; continuing this method till I had relaxed the Hardness. Then I put on a Laced-stockin, by which I strengthened the Part against the Influx; and used all my endeavours to cicatrize the Ulcers, by Pledgits press'd out of astringent Liquors applied upon Lawns, also by epulotick Unguents, Powders, and *Malagma*: but as fast as I healed them in one place, they brake out in another; so that with much difficulty I cicatrized them at last by the help of a Laced-stockin.

3. Observat. of an Ulcer difficult of cure.

A Maid of about seventeen or eighteen years of age, with an Ulcer in her right Leg about a hand's breadth, on the inside near the Ankle, despairing of Cure, sent for a Woman who had some credit in the curing such Ulcers. She came, and seeing a foul Ulcer with thick hard Lips, applied a Caustick to it, I suppose *Merc. sublimat.* It put the Patient to grievous pain for the space of a day and night, causing great Inflammation and Tumour. Upon which consideration the Woman was sent for again. She saw the effects of her Medicine, and would have applied somewhat to ease the Pain: but the Patient's Friends seeing the disturbance in the Ulcer, and doubting whither it might tend, resolved now to put her into the hands of a Chirurgeon, and sent for me. I came, and found the Leg swell'd, and the Escar large, covering the Ulcer, and taking in the callous Lips round. It was so thick and deep, that I much feared it would leave the Bone bare under it. My work was to hasten the separation of the Escar, and mitigate the accidents of Pain, &c. To which purpose, I fomented the Part affected with Milk, dressed the Escar with *unguent. basilicon cum ol. liliorum*, and applied *cerat. Galeni*, with Compress and Bandage to retain it. Thus in few days the Pain ceased, and the Escar separated, leaving the Flesh of a colour as it were bruised. I dressed the Ulcer with a Digestive *ex terebinth. far. hord &c.* and fomented the Tumour and Ulcer with *Decoct. absinth. flor. ros. rubr. balaust. &c.* then applied *unguent. tutiæ* as an Emplaster, with Bandage. After digestion, I incarned with *mel. despumat. &c.* and continued the use of the Fomentation, hoping thereby to give a breathing, and dry up the bruised Parts which made that lividity about the Ulcer, and were the cause of its difficult curing. As the Ulcer incarned, I endeavoured by Bandage to keep the Lips flat to cicatrize with the Ulcer, and to that purpose dressed them and the Ulcer with *unguent. è calce*, touching the lax Flesh with the Vitriol-stone, to dry it, and fit it to cicatrize, and with much pleasure cicatrized it to the compass of a Silver-peny, and thought the work very easie. But, when I least suspected it, the Skin crack'd in the sound edges, and the Flesh in the Ulcer look'd of a dark-red colour. I dressed it with Epuloticks, hoping it would yet cicatrize: but the *Cuticula* afterwards crack'd in three places more, and the Patient suspected the cause to be from a fault in the Bone; as in truth I should my self have doubted it, if I had not seen the separation of that Escar; for the Flesh appeared rotten under the broken *Cuticula*, and as the Ulcer healed in one corner, it broke out again there, or in another place. But this was from the *Intemperies* of the Part, and required again to be digested before I could hope to cicatrize it. To which purpose I dressed it with *unguent. basilicon*

liron and Precipitate, let her blood, purged and vomited her, prescribed her a decoct. *sarsæ*, put on a Laced-stockin, and used my utmost endeavours to cicatrize it, as in such Ulcers I have accustomed to do; but all to no purpose, the *Cicatrix* would not hold two days. I then left off the use of the Laced-stockin, and desired the Patient once more to give me leave to try whether it would cure without it; and to that purpose persuaded her to keep her Leg upon a Stool level with her Body a few days, I hoping thereby to keep off Fluxion; and supposing, if I could once more breath out that gross Blood impacted in the Part, I should be able to cicatrize the Ulcer; and if the Ulcer were cicatrized without Bandage, it would be the more lasting. I repeated the Fomentation, digested the Ulcer, and with a Solution of the Tincture of Vitriol in a Decoct. *equiseti*, &c. applied Pledgits over bits of fine Lawn, and smeared the edges of the Ulcer with unguent. *tutia*, that it might not adhere to them. With such-like endeavours I cicatrized it firm, then put on a Laced-stockin again, with a Compress under it spread with unguent. *tutia*, moderately to dry the *Cicatrix*, and dress'd it once in two or three days, for fear of the worst. A dry Scale arose upon it, do what I could. I anointed it with *Pomatum*, to supple it; then raised it lightly up, and took it off: and so I did two or three times, and at last left it firm and natural as the rest, and so it continueth to this day.

This Ulcer, from its continuation, might be *Annuum*; from its difficulty of cure, *Chironium*, or *Telephium*; from its rottenness of the Flesh, *Noma*; from its callous Lips, *Callosum*; from its frequent cracking of the Skin after cicatrizing, *Dysepulotum*.

As I was passing one day through *Brainford* to *London*, I was desired to see a poor Servant lying under an Abscess in his left Leg, the Crisis of a Malign Fever. The Abscess possessed the outside of his Leg, from the head of the *Fibula* to the Ankle, the Orifice being three fingers breadth below the said *Fibula*. The Matter could not discharge it self till it overflowed; therefore I applied a Caustick upon the lower part of the Tumour to give vent to it, and left him Dressings till he should be able to follow me. Some days after he came to Town: I visited him, and found the lower Opening discharged the Matter well, as I had designed; but it was sanious, and abounded in quantity more than was reasonably to be expected from the Abscess. I endeavoured to deterge it with *mundif. Paracelsi* mixed with Precipitate, and fomented the Part affected with a Decoct. *abfinth. salviae, betonicae, flor. ros. rubr. bacc. myrtill. balaust.* in red Wine; then applied *Emplastr. è bolo*, with a Compress wrung out of the Fomentation, rowled it up, and applied a Desensative over the Knee to restrain the Fluxion: I also let him blood, and purged him with an *infus. senæ, rhabarb. &c. cum syr. de spin. cervina*. But finding the Ulcer would not deterge, I laid it open the whole length; and seeing it sordid, fill'd it with *pulv. Andronis*, applying the Mundificative upon Dossils between the Lips, with an *Emplastr. è bolo* over all, and rowled it up. The third day after, I dressed it again with the Mundificative as before, only adding some *Merc. præcipitat.* to it. This method I continued some days, rubbing the loose Flesh with a Vitriol-stone, dipping some of the Pledgits in Precipitate, and applying it under some of the Lips of the Ulcer which was undigested; then cut off some part of the Lips where they were very hollow and troublesome, and put on a Laced-stockin. Thus I deterged and disposed the Ulcer to incarn under the Lips and elsewhere; and that it might do so, I put the Patient into a Traumatick Decoction, and vomited and purged him as occasion offered. But after some days, observing the Lips of the Ulcer did not unite with the neighbouring Flesh, nor the Ulcer contract as I expected, I made a search with my Probe, and found the Flesh, which

4. Observat. of a Phagedanous corrosive Ulcer.

which was seemingly good, to be soft, and the Lips hollow and thin, and in some parts callous. I dress'd them with that *unguent. æruginis, Cadmiæ, &c.* as it is set down in Ulcers with moist *Intemperies*, rubb'd the callous Lips with the Caustick-stone, and applied *unguent. basilicon* to hasten the separation of the Escar; supposing by these drying Medicaments to dispose the Ulcer to incarnation. But as they incarnated and cicatrized in one end or part, the Flesh became soft and rotten in another, and here and there the Lips were hollow, which I cut off, and thereby freed the Ulcer of them, and by the help of the former Sarcoticks I incarnated it again: but frequently, in the cicatrizing, some part of the Ulcer would be corroded, from the acrimony of the Humour; insomuch that I was necessitated to dress this Ulcer with various Medicaments. In some parts of it I applied Pledgits in drying Waters, as *aq. calsis, lapidis medicamentosi*, and Epulotick Unguents, to cicatrize it; while in some others I applied Detergents; yea, and Digestives in others; and was not wanting the while by Mercurial Remedies, and good Diet, to contemperate the acrimony in the Blood: yet was it a most hard and difficult work. My Kinsman *Jaques Wiseman* was my Assistant in the dressing of him, and saw this Ulcer with much-ado cured: but he continued the use of a Laced-Stockin for some while after.

5. Obser-
vat.

Such an ill-condition'd Ulcer affected the Thigh of a Gentleman of about fifty years of age, of a full Body; it was the *Crisis* of a Malign Fever. Doctor *Wederbourn* was the Physician. The Ulcer was of the compass of a Five-shilling-piece, but lay only in the Skin, extremely corrosive, with Lips standing stiff up round the Ulcer: and although I took them down with Caustick, yet they arose again in the same form; and, being in a place difficultly managed by Bandage, would not cicatrize, but thrust out in the middle little hard Excrescences of red Flesh like Pins-heads; which encreasing, grew bigger, first one, then another. While I was endeavouring to deterge these Excrescences, they became callous, united with one another, and made an unequal *Cicatrix*, notwithstanding my endeavours by the Caustick-stone to rub down those that rose higher than their fellows. At last it joined it self to the Lips round, making a firm and hard *Cicatrix*, which after some while cast off a dry Scurf, and became soft as the natural Skin.

6. Obser-
vat.

In the year after the great Plague, I was sent by Sir *Fran. Prujean* to a Gentleman of about fifty years of age, of a lean dry habit of Body, labouring under a corrosive Ulcer, running from the left side of the Upper-Lip near that Nostril, close along by the Nose, to the great *Canthus* or Corner of the Eye, penetrating the Skin here and there deeper than elsewhere: it spread also without the edges of the Ulcer, making as it were a double furrow along the ridge and side of the Nose superficially in the Skin. These latter did not matter much, nor were they very painful. His Physician had purged him with an *infus. senæ, rhabarb.* and the like, in which were dissolved *Manna* and *syr. de pomis purg.* and put him into a *Decoct. sarsæ, Chinæ, corn. cervi, eboris santal.* with vulnerary Herbs, also purged him once in four or five days with *calomel.* and *resina jalap. cum Elect. lenitiv.* And those days he did not purge, he took *cerus. antimonii in confect.* *Alkermes*, with *pulv. coralli & perlar. &c.* I began my Dressings cum *unguent. tutiæ Vig.* with *Merc. præcipitat.* upon Pledgits in some parts where there wanted digestion, and in others with *unguent. tutiæ* simple, and applied *unguent. comitis.* over all. The next day I took off the Dressings, fomented the affected Parts with a *Decoct. fol. plantag. ros. rubr. balauft. sumach & aluminis* in Wine, and continued to dress the deeper Ulcers with the *unguent. tutiæ* and *Merc. præcipitat.* The other, which were more superficial, I sprinkled cum *pulv. è corn. cervi. ust. balauft. & croc. Martis astring.* and applied

plied *unguent. Comitissæ* over all. By this method I dried up the upper Ulcer on the side of the Nose, but the *Cicatrices* were unseemly, as in most such rebellious Ulcers they are, we being glad to dry them on any fashion as we may. The other Ulcers also fill'd up with Flesh, and afterwards cicatrized in some parts. The deepest Ulcers were also well disposed to it. The season of the year being hot, the Patient retired into the Country, taking the foresaid Medicaments with him, they agreeing well with the Ulcer. His Wife, having often dressed him in Town, knew how to apply them, and dressed him in the Country, where he continued all the Summer. He not giving us the least account of his Ailment, I concluded him cured: but in the Fall of the leaf he returned, and then I found the Ulcer much exasperated, and discharging a virulent Matter, it having corroded deep the whole length from his upper Lip along the Cheek into the great *Canthus* dividing the lower Lid of the Eye, and was passing between the *Glandula lachrymalis* and the Eye: it had also spread beneath into that Nostril, and had passed its Matter through; and in truth the case was most deplorable; for whatever these Ulcers may bear of sharp Medicaments in another Part, here they would not: and possibly this was exasperated by such in the Country amongst those busy-bodies. I endeavoured to recover it by Lenients powerfully drying without acrimony, such as I had formerly used in the like case, and wash'd the Ulcer with a Solution of a Salt drawn off from the flowers of Antimony in *aq. veronicae*. Doctor *Prujean* was again consulted, and Doctor *Bate*, also Mr. *Hollier* and other Chirurgeons. The Physicians repeated the former course with some additions, and sweat him, and after that prescribed him a Diet of Milk, which he lived strictly upon a long time. Many Topicks were proposed by us, but they were only drying Medicaments without acrimony, which agreed well with the Ulcer, and those served only to palliate it. Whilst I attended it, the Ulcer spread it self under that Eye, fretting of the Muscles so, that the Eye was drawn by the contrary Muscles to the external *Canthus*, and distorted so as it was easie to see the Optick Nerve. I was not able to serve him. He lived under Palliation till within this twelvemonth. The Humour afterwards affected the other side: what progress it made there I cannot tell.

A Gentleman of about forty years of age, of a sanguine Complexion and Plethorick, came to me with an *Herpes exedens* affecting the Eye-lids. It had been of some years growth: it began on the middle of the upper Eye-lid near the *Cilia* or edge, in a small Pustule, (as it is described in the Chapter of those Tumours,) and in continuance spread along the edge to the external *Canthus*, where it eat deeper into the Skin, and by erosion caused an Ulcer of a round figure of the breadth of a Silver-peny, eating into that corner of the *Membrana conjunctiva*, and thence the length of the lower Eye-lid, consuming it downwards, leaving the neighbouring Parts schirrhous. Its Erosion in these Parts was increased by the continual Fluxion from the inflamed Eye; for the upper Lid where the *Herpes* first arose was not so much concerned, the original *Herpes* lying there not unlike a *bordeolum*. Upon view of this Ulcer I desired a Consultation, and to that purpose Doctor *Tho. Cox* and Mr. *Hollier* met me. *Collyria* of a refrigerant and exsiccant quality were prescribed, Venæsection in the Arm, Purging with *decoct. epithymi*, &c. and the second day after the external Jugular was opened, and about ten ounces of blood was taken: Fontanels were also made *inter Scapulas*, &c. a Seton was also advised. The Patient thus fitted took a Journey upon extraordinary occasions into the Country. About a month after he returned, and put himself again into my hands. I treated the Ulcer with Epuloticks of various sorts and forms, applied

7. Observation of an *Herpes exedens*.

plied Frontals to intercept the descent of Humours, purged him with *Calomel. cum rhubarbaro*, prescribed Vulneraries in a *decoct. sarsæ, lign. lentiscin.* &c. with Balsamicks to contemperate the acrimony of the Humours. This method not succeeding, we consulted a Physician, who prescribed cooling Juleps of distill'd Milks, &c. But he growing hereby indisposed in his Stomach and the Ulcer raging, he returned to his former Prescriptions; and by the taking *Bezoard. mineral.* those days he intermitted Purging and by the application of *unguent. calaminar.* he was restored to better health, and the Ulcer more sedate: upon which he supplied himself with some of the same internal and external Remedies, and retired into the neighbouring Country. About six weeks after he shewed himself to me. The Ulcer in and near the external *Canthus* was almost cicatrized, and the other Parts well disposed. He then recruited himself with more of the same Medicaments, since when I have not seen him; but hear it increased in the Country, and he hath almost lost the sight of that Eye.

CHAP. XI.

Of Ulcers with Varices.

WE have already treated of *Varix* as it affects the Thigh, Leg, &c. and have there shewed you that it is a Dilatation of the Veins with gross Blood: we also have there delivered the Cause and Signs, and how it differs as dilating some one Vein, or all the branches of that Vein to the very Capillaries: and so the *Varix* may lie deep between the Muscles and Skin, or more superficially. I have also there shewed the advantage and disadvantage that may happen in repressing them. It remaineth now that I say somewhat of them as they are ulcerated by the acrimony of the Humour, or by some accident of Bruise, Wound, &c. whereby they become painful, inflame and swell the Member.

Cure. The Cure of these Ulcers with *Varix* are real or palliative. The Real or perfect Cure proposed by the Ancients I have delivered to you in the Chapter of a *Simple Varix*: it is by making an Incision in the Skin, and taking up the Vein, and tying it, &c. But this way hath not been admitted (to my knowledge) amongst us; nor have I often seen that a Varicous Ulcer could be cured by cutting off the branch leading to the Ulcer, there being commonly more Veins concerned in it.

The Palliative Cure consists in dressing the Ulcer with Digestives and Detersives, according as the Ulcer is sanious or fordid, and the while by good Bandage or a laced Stocking to repress the Humours impacted in the Part, by which Bandage the Lips of the Ulcer are disposed to cicatrize with the Ulcer, I call this method Palliative, for that it commonly lasts no longer than the laced Stocking is worn. In the Cure of these Ulcers, if there be *Plethora*, it may be necessary that the Body be purged, and a Vein opened.

**r. Obser-
vat.**

A Woman of a full Body, aged 54 years, was grievously pained with an Ulceration on her right Leg. Several Medicaments had been ineffectually applied. I being consulted saw the Ulceration large, and the Capillary Veins lie dilated superficially in the Skin; from whence I judged the Ulceration to arise. The Leg was much swelled, and somewhat inflamed. I dressed the Ulceration with *unguent. rutæ Vigon.* applied over it a mixture of *un-
guent.*

guent. nutritum and *populeon*, rowled it up with a Compress and Bandage, and bespake a laced Stocking against the next day; which being then laced on, and the former method of Dressing repeated, the pain ceased from that day, and, the Humours being repressed by vertue of the Bandage, the Ulceration cicatrized in ten or twelve days.

In the Year 1654. I was sent for to an Inhabitant of this City, who com-<sup>2. Obser-
vat.</sup>plained of his fore Legs, and that his Chirurgeon who used daily to dress them was lately dead: he desired me I would supply his place, and accordingly he would allow me the same Salary. I unrowled his Legs, and saw the Ulcers lying in the Skin in several places among the *Varices* without Inflammation or Swelling; but towards night they swelled, and were painful. I acquainted him with the nature of his Disease, and proposed the Cure by laced Stockings. I dressed the Ulcers with *unguent. diapomphol.* and rowled them up. Within a day or two his Stockings were brought him, and after I had dressed his Legs they were put on, with Compress under them upon the Ulcers. There were also pieces of Vellum laid between to defend them from the wrinkles of the Stockings. By the wearing of these the Humours were restrained, and the Ulcers disposed well to cure. I made him a Fontanel in each Leg, and left him some Epuloticks to finish it, which they effected in few days. The Issues he continued to good purpose, for he is alive to this day.

A Nobleman of *Scotland*, of more than seventy years of age, being diseased<sup>3. Obser-
vat. of a
varicous
Ulcer.</sup> here in Town with a large varicous Ulcer in the inside of his left Leg, was commended to my hands by Sir *Fr. Prujean*. The Ulcer reached from the Gartering to the Small of the Leg deep amongst the Flethy Parts; it was crude and undigested. I dressed it with *unguent. basilicon* and *Præcipitate*, applied *unguent. tutiæ* spread as an Emplaster with a Compress wrung out of *Oxycrate*, and with good Bandage rowled it up from the Foot to the Knee. The next day I fomented it with a Decoction of *stor. ros. rubr. bacc. myrtill. balaust nuc. cupress.* in Wine and Water; then dipt the Pledgits spread with *basilicon* in *Præcipitate*, and applied *unguent. tutiæ* as before, with Compress and Bandage. The third day I opened it again, and dressed it as before. The fourth day after, finding the Ulcer well deterged, I dressed it with *unguent. basilicon* mixed with *Præcipitate*; and after I had digested it, put on a laced Stocking; then incarned with this, *R aloes & thuris an. ʒj. assæ fætid. ʒiss. mellis desputati ʒvj. Misc. & fiat Unguentum.* I afterward added a third part of *unguent. è plumbo* to one part of this Sarcotick, and by the help of the Vitriol-stone, and Pledgits dipt in a stiptick Wine, cicatrized the Ulcer. Mr. *Pearce* was his Lordship's Apothecary.

One having been troubled with a sore Breast about a year after Child-bed, it growing more swelled and ulcerated, she sent for me. It was hard, without Inflammation or discolouring in the Skin, and discharged a well-concocted Matter out of the Nipple and some small Openings near it. I wondred what<sup>4. Obser-
vat. of a
Varix in
the right
Breast.</sup> should be the reason it did not cure. At last, in handling the Breast, I felt a *Varix* lying under the Skin: it felt like Net-work. I dressed the Ulcer sometimes with *unguent. basilicon*, and other with *unguent. tutiæ*, applied Emplastr. *è bolo* over the Breast, with Bandage to support it, and advised the wearing of fine Tow sprinkled with Ceruse under that *Axilla*: by which method it was afterwards cured in a month's space or thereabouts.

The last year, while I was putting these Observations of Ulcers with *Vari-<sup>5. Obser-
vat. of a
varicous
Ulcer with
great tu-
mefaction.</sup>* ces together, a poor Woman was brought to me out of the Country, suspected to have the *Kings-Evil* in one of her Legs. The swelling was great, and the Ulcer large and fordid. In handling of it, I felt the Veins dilated under the Skin

Skin in the Fleſhy parts of the Leg from the Gartering to the Ankle, by which it was evident that the Ulcer was varicous; upon which account I undertook it *gratis*, and commended her to one of my Servants to cure, with directions to keep her Chamber, and that he ſhould the while foment and dress her Leg after the ſame method ſet down in the former Observations, and by Bandage diſpoſe it for a laced Stocking. Accordingly he fomented the Leg, dressed the Ulcers with Deterſives, and with Compreſs and Bandage rowled it moderately ſtreight from the Foot to the Gartering. After he had thus rarefied the pituitous Humours which were impacted in the Part, and deterg'd the Ulcer, he laced on a ſtreight Stocking with a Compreſs upon the Ulcer, by which the Blood was ſtreightned in its Paſſage, and the Humours repreſt, alſo the Lips of the Ulcer were brought even and cicatrized in few weeks without Purging or Bleeding, and this prodigious ſwelled Leg was reduced to its natural ſtate. Thus may the greateſt Swelling accompanying varicous Ulcers be removed, and the Ulcers palliated if not cured; for it is confeſſed that they return again for the moſt part upon the diſcontinuing the laced Stocking.

CHAP. XII.

Of Sinuous Ulcers.

Hitherto I have treated of Ulcers which take their Names from the Humours which affect them: I ſhall now diſcourſe of that Ulcer which derives its Name from its Hollowneſs, and is called a *Sinuotis Ulcer*.

Causes.

Sennertus places the Chapter of *Sinus* next to that of a *Phlegmon*: and indeed they frequently ariſe from ſuch, eſpecially where the Oriſice hath not been ſufficiently large to diſcharge the Matter: nay, in ſome great Abſceſſes, where the Cavity hath been very large, there, though the Aperture be great, yet for want of good Compreſſion, and diſpoſition in the Humours, the Skin unites ſo unequally with the Fleſh underneath, that it maketh ſeveral *Sinus's* and doth as it were *cuniculos agere*, make Coney-burrows. Sometimes Abſceſſes do ariſe from within, *viz.* from the Lungs, &c. and paſs their Matter externally under the Arm-pits, or through the Back, Breast, or Sides; or from other *Viſcera* in the lower *Venter*, and raiſe Abſceſſes amongſt the external Muſcles of the *Abdomen*, &c. Of which I ſhall give you ſome Inſtances, having already occaſionally treated of the other ſort in a Treatiſe of *Gun-shot*.

The Antecedent Cauſe may be ill Diet, &c. whereby the Humours exceed in quantity, or evil quality, and being too long retained in the Abſceſs, get a corroſive diſpoſition, and render the Ulcer ſinuous.

Difference.

Theſe Ulcers differ from one another, as they are either ſtraight, or crooked; deep, or lying only under the Skin: or have one or more *Sinus's*. They may be diſtinguiſhed from a *Fiſtula*, in that the latter is callous, which theſe are not, unleſs it be in the very Oriſice.

Signs.

The *Signs* of Sinuous Ulcers may be taken from the preceding Cauſes, whether it be a tranſlation of Matter from within outward, or from *Phlegmon*, or other Abſceſs, Wound, &c. The *Sinus* may alſo be judged by the ſearch of a Probe or Wax-candle. The quantity of Matter will alſo ſhew the largeneſs of it.

Sinuous

Sinuous Ulcers of long continuance are of difficult Cure, by reason of the *Prognostick* weakness of the native heat in the Part, which rendreth it incapable of assimilating its proper aliment, and subject to the receiving superfluous Humours. Also if the *Sinus* run under the Joynt, Nerves or Tendons, where it may not be safely laid open, the Cure is more hard to obtain.

If the *Sinus* proceed from a translation of Matter from within the Body, you cannot hope to cure it till the diseased *Viscera* be healed, during which the Patient is in great danger of a *Marasmus*; but if the sinuous Ulcer discharge little Matter, and that well digested, and be in a place where it may safely be kept open, the Cure is hopeful.

In the Cure of these Ulcers Authors have proposed four Intentions. The Cure first consists in a regulation of Diet and the other Non-naturals, accordingly as it hath been set down in the general Discourse in this Treatise.

Secondly, that the Humours be evacuated and contempered. If there be *Plethora*, the Evacuation will be necessary by Purging and Venæsection. The contempering of the Humours may be by Traumatick Decoctions and other Balsamicks, as all along hath been proposed.

The third is effected in prohibiting the Humour to flow into the Ulcer, and that by Revulsion, Interception and Repulsion: which hath been sufficiently spoken of in the Discourse of *Tumours in general*.

The fourth Intention concerns more immediately the Cure of the Ulcers, *viz.* by the removing of those accidents of Pain, Inflammation, Tumour, &c. without which there is no hope of Cure. In order to this work, you must consider the *Sinus*, how the Matter may be best discharged. If the Orifice be in the declining part, enlarge that: but if the *Sinus* run beneath downward, your best way will be to open that in the declining and lowest part by Knife or Caustick: so shall the Sinuous Ulcer above be disposed to cure. But if the *Sinus* do run under considerable Vessels, or be in such a place where you cannot safely lay it open, you ought then to enlarge the Orifice, and put the Member in such a position as may dispose the Matter to flow forth, and by Compress and Bandage contribute your endeavours thereto. Having thus made way for the discharge of Matter, you are then to deterge the Ulcer with Medicaments proportioned to the impurity of it. The most usual are, *unguent Apostolor. mund. Paracels. & ex apio*: to which may be added *Merc. præcipitat. &c.* If there be a necessity of Injections, you may with a Syringe cast in some of these following Liquors; but do not stop the Orifice the while, for thereby you will dilate the *Sinus*. The milder may be, a *decoct. bordei, cum syr. de ros. sicc. mel. magist. nost.* Or, *Ex summitat. centaur. min. agrimon. equiseti, pimpinellæ, an. Mj. rad. aristoloch. rot. rad. iridis, an. ʒij. myrrhæ, sarcocollæ, an. ʒiij. coq. in aq. font. lbij. colat. adde spir. vini ʒiv. mell. rosar. q. s.* Other of this sort you may see in the Chapter of *Sinuous Ulcers in Gun-shot Wounds*. If the Ulcer arise from some Abscess within the Body, it will not be safe to use Injections, till you can satisfy your self how they will come out again. Therefore in such cases you must consider, as abovesaid, how you may give a vent to the Matter: for while that is retained, there is no hope of detersion. But that being conveniently made, you may keep it open by *Cannula* or with a Pea threaded, as a Fontanel, till Nature shall be disposed by the Physician's help to heal the internal *Viscera*, and then the external Ulcer will heal of it self under the Pea, if you leave it not timely out.

During the Cure of all these Ulcers, you ought to use Fomentations discutient and drying proportionably as the case requireth; *viz.* of *summitat. absinth. majoranæ, hyperici, betonice, flor. cham. ros. rubr. balauft. bacc. myrtill. nuc. cupress. &c.* in Wine and Water, with the addition of Brandy.

A Married

1. Observat. of a Sinuous Ulcer in the Leg.

A Married Woman aged thirty four years, having lain a great while lame with a pain in her right Leg, supposed a *Rheumatismus*, after frequent bleeding, purging, &c. it swelled on the outside from the Gartering to the Heel, and discharged its Matter near the Ankle. Some neighbouring Chirurgeon and Apothecary were imployed, who dressed it and prescribed her Physick accordingly, and after some time permitted the Ulcer to close, endeavouring to persuade her she was cured. But it swelling soon after with Inflammation, I was sent for, and saw the Ulcer near closed: but the quantity and ill quality of the Matter shewed it sinuous; and upon search I discovered it so to the very Gartering, also a *Sinus* running down towards the Heel. I dilated the Orifice with Gentian Roots, applied a Caustick about an inch and a half in length upon the *Sinus* above, and gave vent to the Matter, dressing it up with Lenients, as *unguent. basilicon cum ol. ros.* and after the fomenting it, applied *cerat. Galeni* with Compress and Bandage, supposing the Matter would be intercepted, and the *Sinus's* beneath thereby dispose to cure. But after separation of this Escar, the Ulcer appeared hollow under the Lips; and the Matter flowing from the remaining *Sinus* above, put me upon a necessity of laying that open by a Snip with a pair of Scissors: and after all my endeavours, I was glad to lay open the lowermost *Sinus*, from the Ankle downwards, before I could dispose it to cure. The several Cavities being laid open, I dressed them with Digestives, Detersives and Epuloticks, accordingly as they required, then cherished the native Heat in the Member by good Fomentations, as above in the method of Cure is set down; and by Intercipients and Bandage restrained the influx of Humours.

Caution in making Fontanels.

To add to this poor Woman's Misery, she had a Fontanel formerly made upon the Tendon of the *Biceps*, which had caused a contraction of her Arm, and a hard Tumour on the inside of the *Radius*, with great pain and convulsion in her Hand and Fingers. This very pain kept her watching day and night, exceedingly exhausted her spirits, and put such a Ferment in her blood, as it seemed to me difficult to cure her Leg whilst this disturbance continued on her. Wherefore I began with the Embrocation of the Arm, and so downwards, with this; *R. unguent. nervin. ʒiij. ol. lumbric. ʒij. ol. vulpin. ʒj. ol. origani, lavender. ana q. s. Misc.* and applied over the Tumour on her Wrist a mixture of *Emplast. diachyl. cum gummi & de mucilag.* I also prescribed her an Infusion of *Sena*, &c. with Manna and *syr. de pomis purgant.* and that night one grain of *laud. in conf. anthos.* & *syr. de garyophyll.* and a cordial Julep of *aq. cerasor. nigror. tilia, lil. convul. cinnamomi, confect. Alkerm. & syr. e succ. citr.* of which she drank frequently. She was also purged once a week with *Calomel.* and at other times took *Antimon. diaphoret. &c.* Thus I resolved the Tumour in her Wrist, and the contraction of her Arm, and restored the use of her Hand: during which the Ulcers in her Leg digested, incarnated and cicatrized, according to the method prescribed in the general Chapter of *Ulcers*. Her Leg being extremely emaciated and weak, I advised the bathing it with Flesh-broth wherein had been decocted emollient Herbs; by which it afterwards grew so full, that I was necessitated to put her on a laced Stocking; and thereby the Swelling was restrained, and she recovered strength to walk on it very well.

2. Observat. of a Sinuous Ulcer penetrating the Breast.

A Maid-servant, aged twenty six years, had a small Phlegmon on a part of her right Breast tending to Suppuration. I, supposing it simply such, confidently undertook the Cure; and having suppurated it by the application of *unguent. basilicon*, open'd it by Caustick, and discharged a purulent Matter; which increasing daily with diminution of the Inflammation and Tumour, I made a search with a Probe, and penetrated into the cavity of the *Thorax*. I then discoursing with her, informed my self that she had been long diseased with

with a Cough and frequent Shortness of breath. I was much ashamed of my confident undertaking it. The rarity of the case deceived me, and as many as afterwards saw it, every one judging the Ulcer simple. But its penetrating (as I said) shewed the Cure difficult, and the work of time. Therefore I fitted it with a *Cannula*, which I retained with a snip of Plaister, and applied a thin piece of Sponge prest out of Wine upon it, with Compress and Bandage over it, directing the dressing it twice a day. After I had thus healed up the rest of the Ulcer, I left out the *Cannula*, put in a Pea, and kept it as a Fontanel, till Nature should dispose the *Viscera* within to a better condition. But she, growing hectical, removed into the Country with internal Prescriptions and directions to dress her self; where I suppose she is since recovered of her Fever.

Some while since I was accidentally consulted in the Country by a Chirurg-^{3. Obser-}geon there about an apostemated Breast, the biggest I ever saw. The Patient^{vat. of an} was a Woman of about forty years old: she had a Cough, and was oppress^{Ulcer pe-}ed with Difficulty of breathing. The Chirurg^{netrating} opened her Breast in the de^{the Breast}clining part, and discharged a propornable quantity of foetid Matter. She^{and still} was somewhat relieved by it; but it penetrated into the *Thorax*, and the large^{vanilla} discharge of Matter soon wasted her.

A Child of about four years of age was brought to *London*, supposed to^{4. Obser-} have the *Kings-Evil*. It had three Ulcers lying near one another on his left^{vat. of Si-} Side, between the two lowermost of the true Ribs: they were accompani^{nuous Ul-}ed with Inflammation and Excoriation. He was much emaciated, and afflict^{cers on the}ed with a Cough and Shortness of breath. Upon search with a small Wax-candle^{left Side} into the upper Orifice, I penetrated between the Ribs, and felt the edge of^{penetra-} the uppermost foul. The other Ulcers were made by the insinuation of the^{ting.} Matter for want of timely enlarging the first Orifice. I dressed the Excoriation with *unguent. album camph. & cerat. Galeni*, and applied some of the mild Cau- stick, by which I enlarged those Orifices. After the separation of the Escars, I dressed the lowermost with *unguent. tutia*, and cured them. The upper- most I kept open as a Fontanel with a Pea, for discharge of the Matter from within, not concerning my self in the exfoliation of the Bone, but leaving that to Nature, which seldom fails where the Ulcer is kept well digested. During my proceeding thus with the Ulcers, the Child was prescribed a Deco- ction of *Sarsa* with *Pectorals*, and his Body kept open with *syr. de rhab. in aq. germ. querc.* somewhat of *Calomel.* was also prescribed, *cerussa Antimonii*, &c. and the Child recovered. But while the Attendants grew secure and careless in dressing the Ulcer, the Pea slipt out, and the Orifice closing in the Matter, he was seized with a Cough, Difficulty of breathing, and Fever. Upon which account I open'd that Ulcer again, and relieved him. He went soon after into the Country, and by the foresaid method recovered.

A Man of about forty years of age labouring under a Fever in the Country,^{5. Obser-} it terminated in some Abscess within the Breast, and passed its Matter at last^{vat. of a} into the right *Axilla*, raising a large Abscess there, which, being left to Nature,^{Sinuous} made its way through the Skin; but not having Opening sufficient nor time-^{Ulcer in} ly, the Matter invaded the *interstitia* of the Muscles, and spread it self over all^{the Breast} the Breast and Side, and did not discharge it self outwardly otherwise than as it overflowed: by which means the Abscess became very large, and the quan- tity of Matter had well-nigh exhausted the Patient. It was my chance to come into that Country, and being desired to give him a visit, and seeing the cause of it, I presently made a long Incision in the lower part of his Breast, and gave vent to the Matter; and afterwards made another Opening from the Ulcer in the *Axilla* downwards, where the Matter was streightned by a hard *Callus*.

In

In other parts, where the Matter was also contained, and could not be discharged by the former Openings, I applied Causticks, and the next day divided the Escars, thereby giving way to the remaining Cavities to empty themselves. This being done, I left Medicaments and Directions for the dressing them: *viz. unguent. basilicon* for Digestion; *mundificat. Paracelsi, Merc. præcipitat.* and Vitriol-stone for Deterfion; *unguent. sarcotic.* to incarn; and *unguent tutiæ & desiccativum rubr.* for the cicatrizing the Ulcer. For whatever People pretend of Cure by Injections, the way is slow and hazardous, they often rendring these Ulcers more sinuous, and being of use only where the Ulcer may not be opened by reason of the considerableness of the place. Here in this case, after the Matter had free vent, the Ulcer cured most easily.

6. Observat. of a Sinuous Ulcer penetrating the left Kidney.

A Daughter of a substantial Citizen laboured under an Abscess in the Region of her left Kidney, and was long treated by a bold Empirick, who promised Cure: but after all his endeavours, the Child languishing under the Ulcer, sometimes by reason of the great discharge of the Matter by Urine, and other times through the suppression of it, great pains were stirred up within the Body, and outwardly in the Abscess. I, being consulted, observed that the external Abscess took its original from the Ulcer within the Kidney, and required other manner of dressing, its Cure being the work of time. I proposed the laying it open to the very Part where the Matter passed forth from the Kidney. To which purpose I applied a Caustick upon the Sinus below, divided the Escar, and dressed it up with Lenients. Then after separation and digestion of the Ulcer searching the same with my Probe, I found the Sinus run up above the Orifice; which being also laid open. I discovered the passage into the Kidney, and felt the side of the last short Rib bared by the Matter in its passing out. I dressed the Ulcer with *mundif. ex apio*, and healed up the remaining Sinus's above and below to the very Aperture. While I was doing this work, Dr. Barwick was consulted to help us in the Cure by Internals, who prescribed a Traumatick decoction of *Sarsa*, &c. with the more temperate Plants, and Balsamick Pills to contemperate the Humours. During my disposing of this Ulcer to retain a *Cannula*, the Matter discharged by Urine in great quantity, and the Patient was as sore afflicted, and had the same Symptom that others have who are diseased with Ulcers or Stones in the Kidney; but after vent was given by a short *Cannula* of Lead, she recovered. Having continued the use of the *Cannula* some months, I removed it, and kept a Pea, just in the Opening, and by red Sparadrobe and Compress retained it on; then left her to her Mother to dress, and only called sometimes when they gave me notice of their wants. After a year or thereabout that she had kept this Fontanel open, the internal pains and discharge of Impurities ceased, and she grew more fleshy and strong. She went also daily to a neighbouring School, where she was exercised in Dancing, &c. After the space of two years or thereabout, the Ulcer seeming not to matter more than might be expected from a small Fontanel, the Mother cast out the Pea, and permitted it to heal up. But being soon alarm'd by the old Accidents which returned upon the Child, she sent for me. I opened it again, and left them to keep it so. Dr. Barwick was also again consulted, who repeated the former method with some little alteration. The Ulcer was afterward kept open near three years, during which she repeated her course of Physick Spring and Fall, and was frequently brought to me. At length I seeing her well grown and of a flesh and healthy Complexion, and the Fontanel in a manner dried up, I advised them to throw out the Pea, it being of no use. They did so: from which time the the Patient hath continued strong and well, and is since married.

A young

A young Gentleman of about ten or eleven years of age, was afflicted with a Sinuous Ulcer on his right side of the Spine. It had taken its original from a translocation of Matter rising from within his Body, whilst he lay sick of a Fever in the Country. It came at length to maturation, and was let out by a neighbouring Chirurgeon: but it proving difficult of Cure, he was brought to Town. He was Heetick, and diseased with a Cough, and Shortness of Breath, the Abscess Maturing much, but especially when he bowed his Body downward, or lay in his bed upon the contrary Side; also, in lying upon his Belly, the Matter ran forth some spoonfuls; and upon holding his breath, it blubber'd forth, which shew'd it came from within. Yet, for that sometimes, upon pressing with our hands upon the Muscles of that side the Spine, there discharged Matter, we were apt to think it lay originally between the Muscles of that place. Dr. Micklethwait was consulted, and entertain'd their Physician, and was often present at the dressing the Patient. The Apertion was small, and obstructed by a callous and luxurious Flesh within the Ulcer, whereby neither the Probe nor Wax-candle could make any considerable way. We were satisfied that there were more *Sinus's* than that transverse the Back, yet by the search of a Probe we could make no discovery: but about three days after a redness in the Skin shewed us a *Sinus* lying near the *Os ilion* of about two inches long, the Skin seeming thin. I opened it with a mild Caustick, and having divided the Escar, I passed in a Probe from thence towards the Spine: but that not satisfying me, I applied a Caustick upon the old Orifice, and another lower, whence I had pressed out Matter. Then dividing them, I fill'd them with Precipitate; and by rubbing into those Escars afterwards with the Caustick-stone, I penetrated into the *Sinus's*. One of these discharged the Matter which flow'd that way; and the other served our purpose to discover the *Sinus* penetrating under the uppermost false-Rib towards the Breast; which I dilated, and by detersion enlarged the passage, then fitted the Ulcer with a *Cannula* of Lead, with an Emplaster, Compress and Bandage over it, by which the Matter discharged very well, and the Patient was relieved in his Cough, and recovered his Appetite. The other Apertures, having emptied the external *Sinus's*, were deterged and cured. After the use of the *Cannula* some days, perceiving loose Flesh to arise in the Ulcer, which hindred the discharge of Matter, and that the activeness of our Patient caused the *Cannula* frequently to start out of the *Sinus*, and sometimes sit uneasie, I left it out altogether, and put in a large Pea, with a Thread in it to pull it out at pleasure. By this, with application of the common Sparadrop for Issues, this Ulcer was as a Fontanel kept open, and the Matter plentifully discharged thereby: his habit of Body was also, by the Physician's prescriptions of vulnerary Decoctions and Balsamicks, with lenient Purgatives, so well restored, that he returned into the Country with his Parents. Some-while after, coming again to *London* with them, I gave him a visit, and found him fat, and well recovered. I did not see the Ulcer, but was assured from himself and his Servants that it was kept open with much ease, and that it Mattered but little. I advis'd then the keeping it so, while any Matter flow'd to the Part; which they did, and thereby cured him.

7. Observat. of a Sinuous Ulcer penetrating the right Side.

A
T R E A T I S E
Of the DISEASES of the
A N U S.

The THIRD BOOK.

C H A P. I.
Of Hæmorrhoids.

VARIX in general, hath been handled in one of the foregoing Treatises. But because there is one sort of *Varices* more important than the rest, I mean, the varicous Swellings of the *Vena-Hæmorrhoidales*, I thought it convenient to discourse of them particularly by themselves. These happen very often both in Men and Women, so as sometimes to break, and void Blood; other-times only to swell and distend. But the Consequences of these are very great, both as to the Duration and Intensity of the Pain, and also as to the Tumours and Ulcers that arise from them. These Tumours are sometimes Phlegmonous, sometimes Scirrhus, sometimes Cancerous; many-times they are Ulcerous and Fistulous.

I shall therefore take occasion from that Chapter of *Varix*, to add in this place an entire Discourse of the HÆMORRHOIDS, together with all the Diseases that are of the same kindred and family with them; in which if I swerve from the accuracy of Method which learned Men may expect in the disposition of the Parts of this Book, I hope the young Chirurgion will at least think that fault sufficiently recompensed, by having all the troublesome Diseases of that Part brought at once into one view.

The perspicuity of this Discourse will depend much upon a true notion of the Constitution of the *Anus*, or uttermost *exit* of the *Intestinum rectum*: In which place it is bound about with a Sphincter-Muscle, the contraction of which shuts it so, as to detain within the Guts whatever Excrements fall down thither,

ther, till such times as Nature, being stimulated either by the fulness or provocation of Matter, doth voluntarily relax it; and by the help of several pairs of Muscles dilate it, to make way for the discharge. All these things put together make up that organical Part which we call the *Anus*, in a compound sense; though in a strict signification it denote only the extremity of the *Intestinum rectum*, to which all these things belong, and for the motion of which they are all designed. These Muscles, and especially the *Intestinum rectum* it self, are fed by several Arteries: As, first, the *Arteria mesenterica inferior*, which being almost wholly designed for the *Intestinum rectum*, doth spread branches all over it copiously, and very particularly to that end which we call the *Anus*: and, secondly, the *Arteria hypogastrica* doth send branches to the *Anus*, but chiefly to the Muscles belonging to it. These Arteries bringing Blood hither, have proportionable Veins destined for its return; one of which is the *hemorrhoidalis externa*, usually so called, which is a branch of the Hypogastrick Vein, and corresponds with its cognominal Artery. The other indeed most important Vessel is the *hemorrhoidalis interna*, which receiving the Blood from all the Parts of the *rectum*, and especially about the *Anus*, unites into a slender Trunk, which passing along the Gut, by degrees creeps into the Mesentery, and usually inserts it self up between the Mesenterical branches of the *Porta*, sometimes into the right, sometimes into the left, and sometimes into the Trunk of the *Porta*. More rarely it forsakes this course, and is inserted into the Splenick branch, sometimes without, and sometimes within the Spleen. This last case happens but seldom: yet surely it happened to those that first conjectured this Vein to be the Evacuator of the melancholick Humours of the Spleen. How else should they guess that a Vessel so visibly inserted either into the Trunk of *Porta*, or at least into the Mesenterick branches, should derive Humours rather from the Spleen than the Liver?

But since the doctrine of the Circulation hath quite taken away the foundations of this Hypothesis, we are of late taught clear a new lesson, viz. That the Blood descends hither only by the Arteries, chiefly by the *mesenterica inferior*, by which being cast into the middle and inward Coats of the Gut, it is carried back by the Vein foresaid. Now, if any Man ask me the Reason of the frequent Tumours and Apertions of this Vein, I shall give him this Account: First, That it is set in a depending Part; which reason is common to it and the Legs, both of which are more common to *Varices* than other Parts of the Body. Secondly, That the Legs and all musculous Parts of the Body, when they receive Blood into them, do contract themselves more vigorously for the expulsion thereof, and promoting of its ascent, than the Gut, which is a more lax Part, and contracts with less force at all times, save when Nature aims at an expulsion; in which case, the tendency of Nature is downwards, quite contrary to that of the motion of the Blood, and rather hinders the return than furthers it, binding up the Blood in its own Vessels. Thirdly, The Veins hereabout are in themselves so very small, that they have no Valves; so that Blood being detained in them, is not so easily carried up or hindered from stagnation, as where Valves are frequent. Fourthly, The place is so often moistened by the frequent afflux of Humours, that it is very forward to encrease the natural Laxity of the Part, to dilate the Vessels, and to provoke an afflux of Humours; by virtue of which, sometimes spongy Flesh is thrust out, and sometimes Tumours of other natures generated. Fifthly, That these Vessels being here not only depending, but also cutaneous, scattered in a very thin tender Skin, are apter, upon the impulse of Blood, to fly open, than where they are bound in by a thick strong cover: and for this reason the Nose also (if it be seasonable to speak of it in this place) is apter to bleed than other Parts.

The natural construction of the *Anus* being such as I have described, the preter-natural may easily be enquired into. For if by any Fermentation or Ebullition of the Blood any sharpness so affect it as to cause a stagnation in this place, presently the Veins, being not sufficient for the discharge, grow varicous: and if the Humour, by its sharpness or thinness, or both, stimulates Nature, by this means the *rectum* is always offering to squeeze and contract itself, and binds up the Vein so that the Blood cannot ascend, but is by the violence of the motion thrust back again, to the bursting open of the mouths of the Vessel. If the Coats be thick, or apt to sponginess, then the Parts swell, and either the Vessels themselves appear blue, and in clusters like Grapes, or else Flesh groweth about them, and makes *Ficus*, *Condylomata*, and *Crista's*. If the Humour be of a saline nature, it dries and parches the Skin, and chaps it; from whence comes *Rhagades* and *Fissura*, things frequent in the Nose and Lips aswell as here.

This Humour is most frequently lodged within the verge of the *Anus*, and so appears to the Eye: but it likewise very often is lodged on the Muscles near it, where the *Varices* are hidden, and seldom discover themselves, but only an outward Tumour appears, which in progress often-times apostemates, and at last ends in a Fistulous Ulcer; which, according to the duct of the Vessels that feed it, sometimes penetrates the Gut, and sometimes not.

I shall first treat of the *Varices* themselves, and the Tumours that are consequent to them; and then shall beg leave of my Reader to translate hither a Discourse concerning the Ulcers of these Parts, which I should have placed elsewhere.

The *Varices hæmorrhoidales* themselves will admit of these following Differences; which are either essential, or accidental.

Differences.

I. Essential, are those that are taken from the Parts themselves that are tumefied; viz. either the Vein only swells, or some adjacent Bodies swell with it, or some new Body is generated that adheres to it.

1. When the Vein only swells, then either it swells without bleeding, which we call *Hæmorrhoides cæcæ*, or blind Hæmorrhoids; or, 2. upon swelling, it opens and bleeds, which we call *Hæmorrhoides apertæ*.

2. When other Parts swell with the Vein, other Tumours arise, as Phlegmons, *Scirrhi*, Cancers, &c. all which are seated in the Muscles of the *Anus*, or of the adjacent Parts.

3. When new Bodies are generated, they, according to their figure and substance, are call'd by several names, as *Ficus*, *Condylomata*, Warts, &c. which are all of them Excretions upon the Veins so swelled.

II. Accidental Differences are many: viz. 1. From the Place; so they are internal, or external. 2. From the Bigness; great, or small. 3. Number; one, or more. 4. Figure; round, as the *Hæmorrhoides cæcæ*; or long, as the *Ficus*, and Warts; or triangular, as the *Crista*. 5. Superficies; equal or unequal. 6. The *basis*, broad, or narrow, &c. 7. The Times; periodical, or uncertain. Many other may be reckoned, as Mens fancy leads them.

Causes.

The Internal Causes of Hemorrhoids must be either a meer *Plethora* or a *Cacochymia*. A meer *Plethora* is a rare case; and if ever it happens, sooner affects other Parts than this. But a *Cacochymia* doth produce them sometimes when it is plethorick, and then is commonly periodical, and breaks: or else when 'tis without a *Plethora*, the sharpness of the Humour, or weakness of the Part, or both, do concur to the production. So, according to the variety of the degeneration of the Humour, variety of Tumours do arise: concerning which, we have severally treated already in their particular Chapters.

But

But they are not Internal Causes only to which these Tumours owe their original, they have often External Causes; as biting of Leeches, pain any way caused by Blow, Bruise, Friction, or Puncture. So a Man living near *Piccadilly*, in eating of Plaice, swallow'd a Bone; which, in passing, stuck in the *Intestinum rectum*, and stirred up pain. He advised with some, who applied Leeches, whereby the Fluxion was encreased, and made an Abscess, which terminated in a sinuous Ulcer. The Patient pulled out the Bone, and I was called in, to the sight of the Ulcer, by the Chirurgion, who was of my Name and Relation. So likewise there are many Instances that demonstrate the Piles to arise from Chirurgical Operations and Applications. Likewise sharp Humours passing near that place from the Guts, do, by their acrimony, provoke the Piles. This Humour may be from internal Causes in the Blood, and yet affects externally, *viz.* whilst passing out at the *Anus*, it makes the same affections there, that a sharp Clyster would: or it may be excited by Aloetical, Scammoniate, or other acrimonious Medicines.

After all this Discourse, it will be needless to say much of the *Signs*. Your *Signs* eye will tell you whether it be a Vein or some other Tumour that you see; also whether the Part bleed or not. In other Tumours, the Figure will tell you which is the *Ficus*, *Morus*, *Crista*, *Condyloma*: the last of which is like a round pencil Wart with a narrow Neck; if it be flat, it is *Ficus*; if it have a broad *basis*, it is *Crista*; and so forward; their names being given from their resemblances. *Cancer*, *Phlegmon*, *Scirrhus*, have their Signs taught in their proper Chapters.

If the *Hæmorrhoids* flow seasonably and moderately, they purge the Body of feculent gross Blood, and thereby free it of many dangerous Diseases, as *Pleurisie*, Inflammation of the Lungs and Kidneys, *Quartane-Fevers*, &c. and restore Health. Prognostick.

If they flow immoderately, the Patient groweth weak and faint, is subject to *Cachexia*, *Dropsies*, &c. So also, by the inordinate suppression of them, the Patient is rendred subject to all the fore-mention'd Diseases.

From all which it may be concluded, that there is not less danger in unseasonable suppression of the *Hæmorrhoids*, than there is from their too great evacuation; and that they are not unadvisedly to be provoked; nor yet too suddenly to be check'd.

If the *Hæmorrhoids* call'd *cæcæ*, or blind Piles, be extreme painful, and not timely succoured, there is danger, lest, through the great concurrence of Humours, Inflammation, and Apostemation, &c. do follow.

Those *Hæmorrhoids* which affect that part next the Neck of the Bladder are more vexatious, by reason of the consent they have with it; whence Inflammation and Strangury may happen.

Those *Hæmorrhoids* called *verucales* are the worst sort; the *uvales* are the milder; and the *morales* have a mediocrity between both.

In the Cure of the *Hæmorrhoids*, we shall begin with the *cæcæ*, aswell the external as internal; in both which the Patient's Diet ought to be such as hath virtue to keep the Body soluble; because in these Diseases they are generally costive; and by straining to ease Nature, do only excrete a *Mucus*: and if by such excretions they do void Excrements, it is with much Pain. Therefore Pannado's, Barley-grewels, Oatmeal-caudles, and Broths of Veal, Chicken, &c. with Beets, Spinage, Borage, Bugloss, Endive, Succory, &c. are proper. Their Drink may be a small Ale, Beer, or Wine diluted with Water, or Ptisans. Strong Drinks, and Salt or sharp Meats, are hurtful. The Body may also be kept soluble by Clysters of fat Broths, emollient Decoctions, or of new-Milk; thy may be cast up with Syringes which have a short thick Pipe taper-fashion. Cure of the Hæmorrhoids, and first of the cæcæ, or blind Piles,

fashion. Lenient Purgatives are also of use, viz. *Elect. diacathol. lenitiv. diaprun. &c.*

Caution.

If there be *Plethora*, or the *Hæmorrhoids* be inflamed, Bleeding in the Arm is necessary, and in the Leg if you repeat it. If the Patient hath been accustomed to a Flux of the *Hæmorrhoids*, and they are suppress'd; then Leeches may be applied, that the Blood may have its discharge that way: but unless in the Cales aforesaid, Leeches ought not to be used, and then also cautiously, they rather drawing the Humours to the Part, than carrying them off, and so are frequently the cause of Piles, and all the mischief that attends them. Therefore we take off the *Plethora*, and make revulsion by Bleeding in the Arm, before we apply them.

The External Medicaments proper in the Cure of this Disease, are of divers kinds, and ought to be proportion'd according as they are internal or external, recent or of long continuance, or according to the Pain or Cause whereof they arise.

We shall begin with the External ones, which, whether they be one or more, do always thrust forth with great Pain, and are subject to Inflammation. In which case, if you propose to restrain the Flux, and dry them up, *R. fol. plantag. polygon. summit. rubi, equiseti, an. M. B. flor. verbasci, M. ij. sem. lini ʒij. flor. ros. rub. cort. granat. balauft. baccar. myrtill. an. ʒvj. coq. in sufficienti quantitate aquæ font. & vini rubri, fiat Fotus.* After you have fomented them, apply a mixture of *unguent. popul. cum subure ust.* upon a Pledgit of soft Tow, morning and evening.

If the Disease be in its state, and the Pain exceeding great, *R. fol. mal. verbasci, an. M. j. flor. hyperic. M. B. rad. cynoglos. ʒij. sem. lini, sænug. an. ʒvj. sem. althææ ʒss. coquantur in brodo pro fotu.* Or this; *R. farinæ bord. ʒij. succi intybi, lactucæ, an. ʒiij. sem. psyllii ʒss. ol. nymph. ʒij. vitell. ovor. num. ij. croci ʒij.* In extremity of Pain, *R. olei vitellor. ʒj. opii, gr. vij. Misc.*

In the Cure of the Internal Piles, the same emollient Decoctions and Anodynes which have been proposed in the External ones, may be injected with a Syringe to good purpose.

If the Pain proceed from a gross viscid Matter distending them, such Medicaments ought to be applied as are moderately heating and resolving; viz. *radic. chelidonima, rad. gladioli, cæpæ, allium, squillæ, &c.* Also *Balsam. sulph. Rulandii.*

In the declination of this Disease, you may treat them with Medicaments that are powerfully drying: for the Parts distempered are lax, and, having been much distended with that Humour, cannot easily recover their former tone. Therefore we use *bolus Armen. calx. lota, crocus Martis astring. squam. ferri, ærugo, &c.* alone, or mixed with *mel commune, axung. porcin. &c. aqua calcis, aluminosa, sulphurat. lap. medicamentos. &c.* When they do not yield to such Applications, but are pendent, as *Uvæ, &c.* they will be apt to swell, upon every little disturbance; therefore in such cases I frequently cut them off.

Cure of the Hæmorrhoids aperta, or Bleeding Piles.

The *Apertæ*, or Bleeding *Hæmorrhoids*, ought not to be stopp'd, while they discharge a gross vitious Blood, or while the Patient beareth the evacuation well, and laboureth of some Disease, whereof he may hope to be freed by the bleeding of them. In these cases the *Hæmorrhoids* ought to be permitted to flow freely forth. If they do not, you are to endeavour to make them bleed with such Medicaments as have a quality thereto. The Internals are also those which have Aloes, Scammony, Colocynthis, &c. Dr. Read, in his Chirurgical Lectures, commends *pil. Ruffi*; and a Physician in the Country once told me, he had experimented them with good success, and freed himself of a *Hæmoptoe* and *Phthisis* he was falling into.

The

The Ancients have offered unto us divers Medicaments to the same purpose : viz. the rubbing of the *Podex* with Fig-leaves ; also the Roots of wild-Cucumber, Sow-bread, &c. made in the form of a Suppository, and put up. Or, *R. fellis bovini ℥j. aloes ℥ij. aceti ater. ℥ij. Misce, & injiciatur.* Or, *R. pulv. colocynth. ℥ij. amygd. amar. ℥j. mellis despumati ℥ij. Misce, fiat Suppositorium.* Or, Take two small Onions, Garlick four heads, Flower of Lupins two ounces, Wine-vinegar as much as will make them into a Paste in the form of Suppositories. It would be of great use in the preventing aswell as curing of many Diseases, if such Evacuations could be made when we would : but so far as I could yet ever see, outward Medicaments have rather disturb'd the Parts, than moved them to bleed to any purpose : yet I suppose they may provoke them in such Bodies as have been heretofore subject to them, and so may be of good use.

In others who are extraordinarily subject to the bleeding of the *Hæmorrhoids*, your care will be required in the moderating of them by regulation of Diet, and manner of living : in which Cases I referr you to the Chapter of the *Wounds of Veins and Arteries*. If the Flux of Blood be great, you may make Revulsion by Venæ-section, Cupping, and binding the remote Parts, also by the application of astringent Medicaments ; or by such Internals as may in-crastrate and contemperate the Ferment in the Blood. Such are *syrup. cydonior. portulac. de succo citr. acetos. plantag. de rosis siccis, de rib. myrtillor.* mixed with some of the distilled Waters or Decoctions *ex radic. consolida* : So also *pulv. bistortæ, tormentillæ, fruct. mespilor. malicor. acatiæ, cornu cerv. usti, bol. Armen. lap. hæmatit. sang. dracon. Troch. de terra Lemnia, de spodio, de carab. &c.* may be mixed with Syrups : viz. *R. boli veri ℥j. lap. hæmatit. ℥℔. posca ℥ij. syr. myrtillor. ℥j. Misc.* Or, *R. croc. Martis. astringent. ℥j. conf. ros. ℥j. Misc.* Opiates are also useful in great Fluxes of Blood, viz. *theriaca Veneta, diascord. laudanum, &c.*

The External Applications are, *cort. granat. balaust. thus, mastich, nuc. cupres. gallæ, hyporistis, &c.* made into Suppositories with *gum tragacanth*. Isinglass, or *cum album. ovor.* Hare-foot, with which Pledgits of Tow may be spread and applied externally. The Royal Stiptick cast with a Syringe, is also proper in these Cases.

A Man of about forty years of age, of a lean and dry habit of Body, was ^{i. Obsec.} subject to the *Hæmorrhoids* called *cæcæ*, affecting the verge of the *Anus* : ^{vat. of the rectum, or blind} I let him blood about seven ounces in the Arm ; and, in consideration of his costiveness, advised a Clyster of Milk and Sugar. The same night I fomented ^{Hæmorrhoids.} the Piles with the Decoction of *plantag. polygon. &c.* and applied a Pledgit of Tow spread with *unguent. populeon*, as is prescribed in the Method of Cure : by the application whereof he was eased, and in few days cured.

Another, aged fifty years, of a full Body, diseased with the same kind of Piles, with great Pain. They lay varicous in a great cluster, so as it was not easie to find the way into the *Anus* : but in pressing some of them on one side, I saw a loose red Flesh thrusting from within, outwards. It was the inner spongy Coat of the *Rectum intestinum* relaxed by the Fluxion, and hence a serous Humour discharged, with some *Mucus*. I let him blood in the Arm about twelve ounces at that instant, and stuped the inflamed Piles with Cloths wrung out of Claret-wine. An hour or two after, a Clyster was exhibited of Milk with the Yolk of an Egg, some Sugar, and two ounces of *ol. hyperic.* which brought away hard Excrements, and mitigated the bearing-down which he had complained so much of. The same night I visited him again, and fomented with a Decoction of *malv. verbasf. sem. lini, &c.* as it is described, and applied a Cataplasim

Cataplasm of the *faces* beaten and pulped. I advised him to a slender Diet, and prescribed him a Barley-cream *cum sem. melon. papaver. alb.* a few Almonds, a little Juice of Limons, *aq. ros. & cinnam. bordeat.* He rested tolerably well that night, and was easier in the morning. I continued the same method of dressing till the pain was asswaged, repeating Clysters as occasion offer'd; and afterwards fomented them with a Decoction of *summit. anethi, hyperici, salviæ, ros. rub. nuc. cupres.* in Wine, by which I discussed and dried up the humidity, and thereby cured him.

3. Observat. of External Hemorrhoids.

A Man of about forty-six years of age, abounding with sharp Humours, frequently diseased with the *Hæmorrhoids*, being one time sorely afflicted with them, consulted me. I saw them lying in a great cluster round the verge of the *Anus*, which was also relaxed and turned out. The *Varices* were of different sizes and colours: some were inflamed red, others pale, others livid, and some black. At first sight I supposed them gangrened: but after a further search, I observed the different colour of them proceeded from the great Influx of Humours which dilated them, and caused the Compression they made upon one another. We commonly see the same in making a Ligature in any of the *Varices*; in which case generally they inflame, or, if tied very streight, grow pale, and become livid; then, as the heat extinguisheth, they grow black: yet sometimes, upon tying, the Blood bursts forth, and they recover their native Heat. Thus in our case, through want of timely relief, they inflamed and swelled, and streightned themselves; till, by corrupting, they wither'd, and made room for their fellows. Whether these would have gangren'd, if not then succour'd, I shall not conclude; but in Bodies ill-habited they do so sometimes. These were exceeding painful, and, by reason of the relaxation of the *Anus*, caused a vexatious *Tenesmus*, and discharged much Gleet and *Mucus*. I fomented them at the instant with red Wine, and injected up a spoonful or more of *ol. hyperici*, to abate the acrimony causing the *Tenesmus*; then let the Patient bleed. The next morning I fomented the diseased Parts with the aforesaid discutient and drying Decoction, and applied that old Remedy of fryed Leeks with Butter, beaten to a Cataplasm: by which the Pain was mitigated, and the varicous Swellings relaxed. The Ulcerations were afterwards dried up by the sprinkling them with *pulv. nuc. cupres. & balaust.* and the continued use of the foresaid discutient Fomentation: in which, towards the declination of the Disease, was dissolved *extract. sumach*, whereby the humidity was dried up, and the *Anus* reduced; during which, his Body was kept soluble by Clysters, and lenient *Bolus's* of *castiæ extract.* &c.

4. Observat. of External Hemorrhoids.

A Woman of about forty years of age came to *London* upon some affairs, and, having been formerly subject to the *Hæmorrhoids*, was here again afflicted with them. She being a Stranger, and shy in discovering her Malady, it increased with much Pain, which afterwards put her upon a necessity of complaining. I was consulted, and saw them thrust out in a great cluster with Inflammation to Putrefaction, the *Anus* turned out with great Tumour. She was also diseased with a *Tenesmus*, which put her Bowels upon a continual excretion of much Gleet and *Mucus*. I fomented them with Wine, cut off some of the *varices*, scarified others, and permitted them to bleed; then washed them with a Solution of *unguent. Egyptiac.* in some of the Wine, and injected some *ol. lini.* Afterwards I applied a Cataplasm of fryed Leeks over all. Cordials were prescribed her, and an Anodyne-draught that night, to dispose her to Rest. A Discutient and Resolvent Fomentation and Cataplasm were also applied by her Nurse-keeper, as occasion offer'd. By these Applications the Pain mitigatd, and the Tumour relaxed. The Ulceration being great, required Medicaments drying and deterfive; to which purpose I left off those slabby ones

ones, and fomented with *aqua lapidis Medicamentos.* applying *bals. sulphuris Rulandii* upon Pledgits of Tow, with warm Stupes over it. By the use of these the Ulcerations were healed, and the over-moistened Parts dried, also the *Anus* contracted. During her Cure Lenients were injected, to mitigate the heat and disturbance in the *Intestinum rectum*, and her body was kept soluble by Clysters. Also to prevent future Costiveness, I prescribed her a Lenitive Electuary of *extract. cassiæ, pulp. tamarind. maciæ pulv. jalap. salis tartari*, to take the quantity of a dram more or less at night going to bed. I purposed the making her a Fontanel, but she being well, went out of Town.

A Gentleman aged about forty years, of a healthful Constitution; was often vexed with *Hæmorrh. uval.* on one side of the *Podex*, one whereof, being over-stretched, was incapable of being so discussed, but that it swelled and inflamed upon every little disorder or Costiveness. He at last, wearied with the disturbance, consulted me: it was then swelled, and somewhat inflamed. I, observing its *basis* capable of tying, made a Ligature upon it, and cut it off; then permitting it to bleed some while, I dressed it *cum pulv. Galeni*, with a Pledgit of *unguent. basilicon*, and a Plaister of *unguentum nutritum* over it, and cured it by the touch of a Vitriol-stone and *unguent. desiccant. rub.* Since when he hath enjoyed good health, and been less troubled with the Piles.

What more concerneth the Cure of these kind of *Hæmorrhoids*, we shall be obliged to take notice of in the following Observation of the *Hæmorrhoides aperta*, they being for the most part accompanied with them, and are also attended with *Tenesmus* and *Procidencia Ani*.

A Managed about fifty years, of a gross Body, subject to a bleeding of the *Hæmorrhoids*, presuming upon that benefit of nature, heated his Blood by disorder so, that it flowed violently forth by Stool, and in few days it brought him to be very faint and weak. I injected two or three spoons-full of *succ. urticar.* and applied a Pledgit of Tow on the *Podex* dipt in a Solution of *extract. sumach* in red Wine; then prescribed him an Emulsion, *ex sem. hyos-ciam. & papaver alb.* By this method the Bleeding was stopt, but thereupon he grew feverish, and the *Hæmorrhoids* swelled externally. To them I applied *unguent. populeon cum subere ust.* and took away a few ounces of Blood from his Arm: by which and temperating Juleps, &c. his heat remitted, and he recovered.

A Woman of about forty years of age, having been long afflicted with the *Hæmorrhoids* of both kinds, whereby she was much emaciated and grown cachectick, in extremity of a Fits of both kinds joyned together, sent for me. I caused this Lenient to be injected, and applied upon a Pledgit of Tow: & *mucilag. sem. psyllii extract. in decoct. malvar.* ʒiv. *myrrhæ, thuris, croci pulveriz. an. ʒss. vitell. unius ovi, ol. ros. ʒss. opii gr. viii.* This gave the Patient present ease; but the next day she was seized with a pain in her Head, and her *Uvula* and right Tonsil grew inflamed. I supposed it was a translocation of that Matter which had been checked by the Anodyne; yet could scarce believe that a Body so emaciated, and so lately emptied by the bleeding of them, could be subject to such an Accident. I let her blood in the Arm four ounces, and by the application of Discutients externally to the *Facies*, and a Gargarism of a few distilled Waters with *sal. prunella & syr. diamoron*, the Inflammation remitted, and she recovered.

A Man aged about forty years, extremely subject to the *Hæmorrhoids* many years, came to Town, and being sorely diseased with them, he consulted me. I saw him newly come off the Close-stool, sitting upon the corner of a Trunk,

Trunk with a Pillow and Napkin under him, his breeches hanging about his Legs: his Visage was pale and dejected, a cold Sweat dropping from his Brows. He had been twice upon the Close stool straining with great Uneasiness, voiding only a *Mucus* with a bloody *serum*. He then went again to it, and after some while straining, returned discontented to his bed, where (he said) he was wont after an hour or two to be easier. I viewed the diseased Part, and saw the *Podex* relaxed so much as I believe I might have put up my four fingers. It was varicous round the verge, and had bled some two or three ounces. From the internal Piles he frequently bled very much, yet was not the less pained. I called for soft Napkins well warmed, and applied one after another hot, whereby I soon quieted and reduced the relaxed *Anus*. I commended to his use an Infusion of Astringents in red Wine, to be applied hot with Scarlet-cloths immediate upon his coming from the Close stool, and to wear a Pledgit of Tow sprinkled with *pulv. nuc. cupressi. balauft.* &c. by the use of which he was frequently much eased. Some years after he died suddenly of an Apoplexy, as was supposed.

CHAP. II.

Of Procidentia Ani.

Names.

HAVING, in the preceding Discourse made often mention of a Relaxation of the *Anus*, we shall now treat more particularly of it. It is called by the Latines *Procidentia Ani*, also *Prolapsus* and *Exitus Ani*. By those names it is also known amongst us. It is a Relaxation of the Sphincter to such a degree, that the internal rugous Coat of the Intestine turneth out, and beareth down, making a Swelling proportionably.

Description.

Causes.

The Causes of this Disease are Costiveness, at which time straining to ease nature it frequently falls down; also Fluxes of the Bowels in *Diarrhoea*, *Dysenteria*, and especially *Tenesmus*. The Piles are for the most part a Cause, so is hard Labour in Child-bed, and the Stone in the Bladder. In Infants it commonly falleth down through Crudity or over-moisture of the *Levatores Ani*. In those of Age the Cause will be more certainly discovered by the complaint of the Patient.

Signs.

The Signs are evident to the sight: the inside is turned outward, and the Tumour is of a fleshy colour and rugous, by reason of the folds and wrinkles of the Coat; and it is accompanied with an uneasiness, and desire to go to Stool.

Prognostick.

The Cure of this Disease is difficult, but much worse in old people than young; and if it succeeded a *Dysentery* or *Hæmorrhoids*, it is the most difficult. In the latter case it is scarce ever curable. If it happened through Costiveness, the Cure is hopeful; so it is if it was caused from the Stone in the Bladder, or a Child-bed Labour, if in that work the Muscles or Membranes were not torn.

Cure.

In order to the Cure, the prolapsed Intestine ought to be put up with an easie hand. The usual method is, to apply a stupe of Flannel or Scarlet-cloth, wrung out of some Decoction of red Wine hot: and after the Part hath been a while fomented, you are to thrust up the relaxed *Anus* with your fingers till you have reduced it. If the Tumour be great and hard, you ought then to foment it with Emollients and Discretients, *viç. fol. mal. viol. raph. barbat. flor. sambuci. nebam. meliloti. sem. lini, semigræci, &c.* The Tumefaction removed,

reduce

reduce it as abovesaid, binding on a Button of soft Tow prest out of an Astringent Decoction made thus; *℞ bacchar. myrtillor. flor. ros. rubr. balauft. an. ʒss. nuc. cupress. gland. querc. an. ʒj. sumach. acatiæ, hyporist. an. ʒiiss. corn. cervi usti, thuris, an. ʒij. infundantur in vin. rubr. ℥ij. & coquantur ad tertiæ partis consumptionem.* Your next endeavours should be how to prevent the descent of it in the time of easing Nature; for upon the least straining it for the most part thrusts down again. Therefore it is that we desire the Patient should be so well disposed in his Bowels, that, if it be possible, he may go seldom to Stool, and when he doth, that it may be with the least straining. He should also have a couple of Sticks whittled and fitted for him to place close on each side the *Podex*, so as in straining the Excrements may pass out, yet the Prolapse of the Intestine be hindred. For the like purpose I have frequently commended a small Tin-hoop to be fastned in a quilted Boulster, which being fitted with Bandage may be retained at that time to pass the Excrements through, and prevent the Relapse. What you can invent to this purpose will much facilitate the Cure.

An Infant about a month old was diseased with a *Procidencia Ani*, which being not reduceable by the Women; I fomented it with red Wine three or four times, then with my Fingers upon the Stupe pressed equally upon it, and reduced it. I continued the fomenting it a while longer, then applied a Pledge of dry Tow upon the *Anus*, directing them how to relieve it in case of its Relapse. I afterwards sent them papers of Astringents to infuse in red Wine, to apply as above said. By which method it was strengthened and cured in few days by the care of the Nurse.

A sickly Child about four years old had been some months diseased with a *Procidencia Ani*, by reason of a preceding Flux of the Bowels with *Tenesmus*. It had been neglected by the Servant that attended it, and was too much swelled to yield to a Reduction. I fomented it with the discutient and emollient Decoction prescribed in the method of Cure, then bound on warm Stupes wrung out of the same, and kept him in bed. The Swelling being thereby somewhat relaxed, I endeavoured again Reduction; but it not yielding thereto, I fomented it with Discutients with somewhat of Astringency, and sprinkled the inner Tunicle with *pulv. nuc. cupress. corn. cervi usti, an. part. æqual.* then applied warm Stupes thereon. After I had thus dried up the superfluous Humidity, I attempted it again: but as I pressed upon it on one side, it rose on the other. I repeated the warm Stupes, and with my Fingers upon the Stupe I pressed close upou it, and twiddled it in first one side, then the other. It being reduced, a Compress of Tow made in the form of a great Button, dipt in an astringent Decoction, was placed thereon, and retained by good Bandage. His Diet was boiled Rice and such like, which might prevent a Looseness. At his next going to Stool I was fetched. After he had eased nature, I fomented the relaxed *Anus*, and having cleansed and dried it, reduced it easily, then dressed it as before, and continued my attendance at such times; whereby I facilitated the work and cured the Child, by the assistance of the Servant that attended it. Many such-like in Children to twelve years of age I have happily recovered by the like method.

A Man of about twenty eight years of age, afflicted with a *Procidencia Ani*, consulted me. It was neither inflamed nor hard; but, having been long out, was not easie to reduce. I returned that evening with a Decoction of *summitat. anethi, hyperici. flor. cham. ros. rub. balauft. sumach, nuc. cupress.* made in Wine; and after I had fomented the relaxed Parts, I endeavoured again to reduce it: but it not yielding, I sprinkled the inner Coat of the relaxed *Anus* with *pulv. nuc. cupress.* and applied a warm Stupe over it with retentive Bandage. The

next morning I returned thither, and repeated the Fomentation, and having thereby reduced it, and dressed it up with a Compress of Tow made in the form of a Button dipt in a Solution of *extract. sumach.* in red Wine. with Bandage to retain it close. I afterwards made him several Visits, and assisted him in the reducing it, directing him according to the way proposed in the method of Cure for preventing the Relapse: by which method the Relapse was lessened, and the easier reduced when it slipped out.

4. Observat. of Procidentia Ani.

I was fetched to a Woman of about forty years of age, who had been long afflicted with the *Hæmorrhoids* both internal and external, through the continuance of which the Sphincter relaxed, and, for want of timely reduction, in process of time swelled big, and was accompanied with great Fluxion, Ulceration, and various sorts of Excrescences, which rendred it incapable of being reduced. I advised a discutient and astringent *Fotus* as hath been proposed in the method of Cure; and the next day cut off the Excrescences with a pair of Scissors, and applied warm Stupes, to continue the bleeding till I thought I had sufficiently given a breathing to the Part. Then sprinkling them with a mixture of *pulv. cort. granat. nuc. cupress.* with a third part of *Merc. præcipitat.* I applied a warm Stupe over all, with retentive Bandage. The next day I repeated the same Applications, with this Emplaster under the Stupe: *R pulv. summitat. millesolii, flor. chamæmel. an. 3vj. cortic. granat. 3ij. ciner. ligni fraxini 3ij. aluminis usti 3ij. rad. squill. coct. sub cineribus 3iv. pistentur in mortario cum axung. porc. & mel communis an. q. s. fiat Emplastrum.* By the continued application of these Medicaments, I discussed part of the Swelling and dried up the Ulcerations, and by rubbing of many roots of the Excrescences with the Vitriol-stone consumed them. But the circumference of the *Podex* after all being too turgid to turn inward, I fomented it with Emollients, and applied Cataplasms of the same; by which it was after a while rendred reduceable, and by Compression retained: but by reason of the laxity and over-moisture of the Part, she was subject to the *Hæmorrhoids* afterwards, and the *Anus* frequently relapsed. She languished long under that Disease, and died hydropical.

5. Observat. of Procidentia Ani.

A Person aged about sixty years, having laboured a long time under various Chronick Diseases, and of late years a supposed *Fistula in Ano*, which grew daily more vexatious; I was consulted. Upon view of the Part, I judged it a *Procidentia Ani*. It being questioned, I called for warm Napkins, and applying them hot one after another, I reduced it whilst I pressed one of the warm Cloths close to it, and thereby eased the Patient, and confirmed the Judgment I had delivered of it. This *Procidentia Ani*, by reason of its long continuance, and the continual discharge of serous Humours by it, rendred the Part so lax, that it relapsed upon the least walking. Wherefore I provided accordingly a Compress dipt in astringent Liquors, with Bandage to retain it close, and some days attended him in reducing it, and in shewing his Servants how to reduce and dress it. The work of Reduction being grown more easie to his Servants, the Patient contented himself with having it reduced so often as occasion offered, and declined the trouble (as he called it) of Bandage. During the time of my attendance on this Patient, I observed the folded Sheet which lay all night under him to be wet through, as if so much water had sieped into it. Upon enquiry whence it proceeded, and feeling his Belly, I concluded the Patient hydropical, and that the discharge *per annum* was from thence. I was not much credited; but it appeared about three quarters of a year after, when he dying of an Apoplexy, his Servants taking him out of Bed, the Sheet under him was found wet as aforesaid. In order to the Embalming of him, I pierced his Belly, and discharged twenty two pints and a half

half of Water. Towards the latter part of his life he was subject to Vomiting, with dejection of Appetite: the *Proidentia Ani* was also continually attended with a *Tenesmus*, which was no small disturbance to his Bowels. In the opening of the lower Venter, I found the *Viscera* much obstructed; and in the left Kidney there was one stone filled up the same.

CHAP. III.

Of Condyloma, Ficus, Thymi, &c.

THE *Anus* is also subject to various sorts of Excrecences besides those arising from the *Hæmorrhoids*, and have names from the things they most resemble. being called *Condylomata*, *Ficus*, *Cristæ*, *Thymi*, &c. Authors do not agree about the Names of the three former; some making *Crista* and *Ficus* all one, only differing as they are greater or lesser; and taking no notice of *Condyloma* at all. Others also have given very different Descriptions of them, such as seem to me insufficient to distinguish them. I shall therefore take the liberty to represent them to you as I have seen them grow.

The *Condyloma* and *Ficus* I suppose to be both one, differing only in their manner of growth; they both arising from a peculiar kind of soft round Tubercle distending the internal rugous Tunicle of the *Anus*, without pain or alteration of colour in the Skin; and as that increaseth, it groweth fleshy. If it continueth that figure, it is *Condyloma*: but if it shoot out with a long neck, as frequently it happens, resembling a Fig, it may deserved be called *Ficus*. Descripti-
on of Con-
dyloma.

Cristæ are a sort of hard Excrecences arising somewhat distant from the verge of the *Anus*, in the form of a Cox's Comb, and are usually a symptom of the Pox. Cristæ.

Thymi are hard Excrecences not unlike the tops of the Herb they borrow their name from. They partake of the nature of Warts, and differ only in their manner of growth. There are other sort of Excrecences of a softer substance, called *Papulæ*, &c. Of the former some are benign, others are malign and of a Cancerous quality. Thymi.

Rhagades are Chaps or Fissures about the verge of the *Anus*, proceeding from the acrimony of the Humour fretting and cracking those Parts. This happeneth in those who have been infected with any of the above-mentioned Excrecences: it may also proceed from a *Diarrhæa*, &c. They are deep or shallow, dry or moist, malign or benign, according to the quality of the Humour to which they owe their original. Rhagades.

The above-mentioned Excrecences are enough distinguished by the sight from one another. They differ from the Piles, as affecting only the Skin, and that without Tumefaction of the *Podex*: nor have they any likeness to a *Varix*. Diffe-
rence.

The material Cause of all these sorts of Excrecences is pituitous or gross viscous Blood thrust forth by the strength of the Expulsive Faculty out of the Pores of the Skin, and dried up into these forms in which we see them. The *Condyloma* and *Ficus* arise from a viscous Humour flowing preternaturally into some part of the rugous Coat of the *Anus*, raising it into a small Tumour, as I have already said. The *Cristæ* and other Species of Excrecences are reputed to arise from the *Lues Venerea*, and from that filthy sin of *Sodomy*, and have the *Rhagades* for their Companions: which I believe is frequently so seen Cause.

seen in the hot Countries: but amongst us is a Symptom of the Pox. Yet I have met with it in a little Infant; and all the other Species in people whom I suppose never had the *Lues Venerea*.

Prognostick.

The *Thymi* are the worst sort of Excrecences, they being more often malign and are then painful; also if their extirpation be unsuccessfully attempted, they grow cancerous. The *Condyloma*, *Ficus*, *Cristæ*, &c. are not difficult to extirpate or cure, if the Disease be rightly considered from which they arise.

Cure.

The Cure of these Excrecences at their first budding forth may be attempted by Medicaments that are astringent and drying: as *summit. rubi, equiseti, fol. & bacchar. myrtillor. sumach, cort. granat. balauft. squamæ æris, ferrugo, calx lota, alumen*, &c. made into Fomentations, or poudered and mixt with Oynments, and applied upon Tow. If these do not check their growth, you may cut them off with a Knife or Scissors, and consume the remaining roots by escharotick or actual Cautey and then proceed in the Cure by Digestion and Epuloticks accordingly. To prevent their growing again, Authors commend the Ashes of Vine and Bean-stalks mixed with Vinegar, to apply upon the Part.

The Cure of *Rhagades* consists in removing the Callosity, and cicatrizing them smooth, as abovesaid. If Humidity abound, it requireth Exsiccants: to which purpose, *R. flor. ros. rub. bacc. myrtill. summit. rub. an. M. j. rad. tormentill. bistortæ, an. ʒj. aluminis ʒj. coquantur in aq. chalybeat. ad bibs. in fine decoctionis adde vini rub. ʒiv.* with which foment the part. Then apply such like: *R. lithargyri, cerussæ, an. ʒiij. sarcocollæ, mastich. thuris, an. ʒj. terræ sigillatæ, ʒij. ol. ros. ʒiv. ceræ q. s. Misce super ignem, deinde pistentur in mortario plumbeo pro usu.* If Siccity be the fault, you must dress them with Medicament that are humecting; as *R. pingued. vitulin. anatis, gallinæ, an. ʒij. lithargy. aur. ʒj. Misce in mortario plumbeo S. A.*

1. Observation of *Rhagades*, *Ficus*, *Thymi*.

ALL the Species of Excrecences are for the most part Symptoms, as I have said, of the *Lues Venerea*, to which Treatise I shall refer you for a more particular Information, and shall here, for brevity sake, give you only one Observation of a person who suffered under various Species of them the most I ever saw, yet was not venereal. He was a man of about fifty six years of age, of a healthy Constitution; he complained that he had been long obstructed in easing of nature by reason (as he thought) of the Piles which of late was much more grievous to him, they in a manner stopping up the *Anus*. I viewed the Part, and saw a numerous company of Excrecences, great and small, overspreading the *Anus*, insomuch that it was very difficult to find their insertion. There were five very large, of the form of green Figs, the least of them about an inch and a half long, inserted within the *Anus*. There were other lesser growing more externally, upon the verge of them some hung like so many Leeches. There were also about the *Anus* many *Thymi* growing right up of different size; under which were *Rhagades*, Chaps and Fissures, with small Excrecences or *Papulæ* thrusting here and there out of them. These being all washed and cleansed from the Excrements, retained the natural colour of the Skin, and were not painful. He had concealed his Disease so long as he could, and was encouraged to send for me, upon a report he had heard from a Neighbour of his, whom I had freed from an Excrecence in the same Part. I readily undertook the Extirpation of them, but desired to have some witness of the work: to which purpose one was consulted; but he discouraging us with a prediction of their malign quality, left us. Yet the Patient urging me to proceed in the operation, and I considering the necessity of it, I came the next day with my Servant, furnished with Knife, Scissors, Needles and strong Thread, actual and potential Cauteries, astringent Powders, &c. Then having

having placed the Patient in a clear light, with his Knees drawn up towards his Body, he with my Servant assisting with their hands, I again considered the Part affected; and finding it difficult to get to the roots of those inserted within the *Anus*, thought to begin with those more remote. But suspecting how his courage might hold out, I began with those nearest the verge of the *Anus*, clipping them off close from their roots one after another, as fast as I could, not minding their bleeding, till I had freed my way to those within the *Anus*. Then with a Sponge dipt in *Oxycrate* I washed off the Blood, and with small actual Cauteries dried the roots of them. That done, I oiled my Finger, and passed it into the *Anus*, to make way to the next: and whilst I held my Finger beyond it close to the root, my Servant the mean time pulling the *Ficus* to him I passed the Scissors under it towards the end of my Finger; then tied them, and passing on cut them off, my Finger within directing me in the work. I tried the *Speculum Ani*: and by the help of my Finger within, and a *Speculum* at the entrance upon the verge, I cleared the *Anus* of them, cauterized their roots, and put up a bit of a Rag dipt in *unguent. refrig. Galeni*. Then I fell to work with the rest, snipping and cutting them off, and consumed their roots with actual Cauteries. Some of those that had very small roots I burnt with the Button-end of my Probe, others with the point of my *Forceps*. The Lips of some of the *Rhagades* which were callous, I burnt with the *Spatula*, some others I rubbed off with the Caustick stone. Thus in less than an hour and a half I consumed them all, and left the *Anus* free, and the Parts about smooth, I dressed them up with a Pledgit of Tow spread with *unguent. refrig. Galeni*, and in the space of fourteen days or thereabouts cured him: for indeed most of them cicatrized as the Escars cast off. This Patient lived many years after, and publickly acknowledged the Cure to persons of great Quality. If these had risen from the Pox, they would have soon returned, and rendred my operation unsuccessful; which they did not.

A young married Wife having been long diseased with an Excrecence 2. Observat. A preternatural Body growing from the Os coccyx growing out from the *Os coccyx* between three and four inches in length, not unlike the tail of a *Turkish Sheep*, retaining the natural colour of the Skin, without pain, except in time of Child-bed; she being again with Child, and dreading the pain thereof, consulted me. I undertook the extirpating of it, and in the Presence of some eminent Physicians made a Ligature upon the *basis* of it, and cut it off. It scarce bled; yet having astringent Dressing ready prepared, I applied them. We slit the preternatural Body open, and judged it to be a soft white Fat, like that of a Rump of Mutton. At the next Dressing I perceived the remaining part was Fat, and had for its root long slips of the same kind of Fat, running up from the *Coccyx* on each side to the back of the *Os sacrum* about two inches in length. I laid it open, and digested it out with *Merc. præcipitat.* then cured it according to the usual method in such cases, since which time she hath been delivered of two Children without any disturbance from that Part.

CHAP. VI.

Of Phyma.

IN the lower part of the *Intestinum rectum*, where the *Musculi Ani* are inserted, there frequently ariseth a hot Tumour called *Phyma*. You may find it described amongst the Tumours arising from Blood; therefore I shall not trouble

trouble you here with a farther Description of it; but give you three instances of it as it affected the *Anus*, the better to shew you the original of *Fistula in Ano*: they for the most part proceeding from these Abscesses, whether they brake within and ulcerate there, or the matter descend lower, and raise a Tumour without the verge of the *Anus*.

Prognostick.

Those within the *Anus* produce the most dangerous *Fistula*. The matter of which penetrating through the coats into the neighbouring Muscles, is rarely discovered till it hath made its way more outward amongst the Muscles of the buttock; but if it chance to be discovered sooner, yet the cure is most difficult: nay those *Phyamata* which appear outwardly upon the verge of the *Anus*, though they are of easier cure; yet if they be ill handled, the defluxion is continued, and the *Sinus* within groweth callous, and require the same method that *Fistula in Ano* do, it being directly such as you may see in the following Chapter.

Cure.

The way to prevent these mischiefs, is timely laying open the external *Phyma* by Caustick, that the Matter may have free discharge; for if you open that by Incision it must be kept so with a Tent, which cannot be easily retained in: and whether the Matter be choaked in by that, or it slide out and the Orifice close up, is alike inconvenient and prolongs the cure. The internal *Phyamata* are easily cured if they be timely discovered and opened by Incision.

1. Observation of an external *Phyma*.

I Shall begin with an instance of an external *Phyma*, in a Child of about four years of age, the only Son of his Parents; he had been grievously pained in *Ano* four or five days, they not discovering his malady: but the Tumour appearing externally, I was fetched; it lay *juxta Anum*, of the bigness of a Pheasant's Egg, perfectly suppurated. I applied the milder Caustick upon the declining part, with Plaister and Bandage. The next morning I heard the Patient had rested tolerably well. I took off the Dressings, and found the Matter discharged through the Escar, which was, as I had designed it, the breadth of a two-pence. I dressed it with a Pledgit of Tow spread with *unguent. basilicon cum ol. ros.* by this method the Matter discharged freely without disturbance in going to Stool, and it cured by the Maid's dressing, I not visiting it thrice. Many such I could give you of these so easily cured.

2. Observation of external *Phyma*.

A Country-man aged about thirty years, of a Sanguine full body, coming to *London*, was taken with a pain in *Ano*, and desired my advice. I viewed the Part and made a search with my Finger dipt in a little oil, but discovered nothing whereby I might suspect Ulcer or Piles. I injected a spoonful or two of *ol. liliorum* warm, and directed him the use of it; but after three or four days the Pain increasing, I made a search, and felt a Swelling on that Part which lieth next to the neck of the Bladder; I took a crooked Incision-Knife, and defending the edge of it almost to the point, with a bit of Plaister conveyed it in by my Finger to the Swelling, and made Incision into the Tumour; he presently discharged a spoonful or two of Matter. From that time he complained no more of pain. I cast up a little *ol. Hyperici* warm as before, and henceforward dressed him no more, he being perfectly cured.

3. Observation of a *Phyma*.

A Planter which came from *Virginia*, lodging in the *Old-Baily*, being extremely pained in *Ano*, consulted his overthwart Neighbour a Physician, who prescribed Fomentations, Embrocations, &c. but his Pain increasing, and the Physician not coming to him so often as he desired, the Patient went to the Physician, where renewing his complaint, I was sent for and viewed the *Podex*; but seeing no outward disturbance, I anointed my Finger with a little

little Butter, and in passing it up in *Ano* felt a Tumour, which, with their leave, I opened, as in the former Observation hath been said. The Patient cried out, he must ease himself. I finding nothing for him to do it in, and seeing by my Finger and Knife it was Matter, I bid him ease himself there: He did so, and discharged only a quantity of Matter well concocted. From that time he complained no more of Pain, and was cured within a day or two by the benefit of Nature; I declining to cast in any Injections, lest they should get into the Abscess and make it sinuous.

CHAP. V.

Sinuous Ulcers, and Fistulæ in Ano.

FROM the afore-recited *Hæmorrhoides & Phymata*, Sinuous Ulcers are made.

Those proceeding from the Internal Piles are made gradually, and pass their Matter (which is generally a thin Gleet) between the Tunics of the *Intestinum rectum*, making their way out near the verge of the *Anus* through a small pin-hole. They are rather discovered by the discharge of a thin Humour staining the Shirt, than by any Pain they have; which discharge is often thought to be rather a Sweating of the Part, than otherwise: but in progress it is accompanied with Itching, and is subject to Excoriation; from whence it is that various sorts of *Papulæ*, &c. do arise, and sometimes *Rhagades*. At last these sorts of Sinuous Ulcers spread outward, or grow callous; and the Orifice groweth hard and so contracted, that you cannot pass in the smallest Probe.

Those Ulcers which do proceed from *Phyma*, do pass their Matter deep amongst the *Interstitia* of the Muscles, as other Abscesses in fleshy Parts do, according as they can make their way. These sometimes penetrate through the *Intestinum rectum*, to the very Neck of the Bladder, yea, into the *Pelvis*; or at best do insinuate their Matter in amongst the *Musculi Glutei*, &c. This happeneth according as the Apostemation at first lay deep or shallow, or was great or small, or in a Body plethorick or ill-habited. They are very painful, and discharge a purulent Matter proportionably as they are hollow, and are they which do *cuniculos agere*; yet they do grow callous, and are reckon'd amongst the worst sorts of *Fistulæ Ani*.

The *Causes* I have already declared, with the manner of their growth; by which, I suppose, they may be sufficiently discovered. If you make a search with a Probe into the Sinuous Ulcer arising from the Piles, and the while pass your Finger into the *Anus*, you shall feel the Probe run all along between the Tunics of the Intestine, and, it may be, pass out through the Pile which gave it its original: whereas the other Sinuous Ulcers have in their beginning no external Orifice, but discharge their Matter by Stool; but at length, possibly, they pass their Matter externally through one or more Orifices, more or less distant from the *Podex*, or according as the Abscess lay in the Intestine.

Sinuous Ulcers arising from the Piles are healthful, and ought not to be cured while they may be continued without pain or disturbance to the Patient. Prognostick.

Sinuous Ulcers arising from *Phymata*, are dangerous, and difficult of Cure, if they have been of long continuance. The Ulcer in *Ano* is also of difficult Cure, if it discharge great quantity of Matter by an Opening so remote that

you cannot lay it open with safety; but if the *Sinus* lie near the *Anus*, the Cure will be more easie.

Sinuous Ulcers, in progress of time, grow callous, and are then deservedly call'd *Fistulæ*. What a *Fistula* is, I have declared in its proper Chapter: How these Sinuous Ulcers become Fistulous, I have shewed you in this foregoing Discourse, with the Causes, &c. You may also make a Prognostick of them, from what hath been said of Sinuous Ulcers, they differing only from them as they are callous; for if *Fistulæ* do run superficially upwards by the *Rectum intestinum*, whether it penetrate the *Anus* or not, the Cure is without danger or difficulty performed. Those *Fistulæ* which run higher up than you can reach with your Finger, are difficult to Cure, because you cannot lay them open the whole length; for the Humour will flow from the remaining *Sinus* upon the Part opened, and hinder its cicatrizing.

Those *Fistulæ* which penetrate deep beyond the *Musculi Ani*, if they be cured by laying open, the Patient will afterwards retain his Excrements with much difficulty; and if they reach quite beyond the *Sphincter*, the retention is impossible.

If the *Fistula* be the effect of a Cacochymical habit of Body, especially if the Lungs be weak, or any other of the *Viscera*, it will be reasonable to keep it open as a Fontanel for discharge of that peccant Matter; but if it cannot be kept open with ease to the Patient, it will be requisite that a good Diet be prescribed, and the Humours carried off some other way, before you cure the *Fistula*, and Issues elsewhere opened.

Cure.
Palliative.

Fistulæ therefore in *Ano* are not always curable, nor safe to be cured; they frequently serving Nature for the discharge of superfluous Humours, brought down by the Hæmorrhoidal Vessels: so that unless they be painful and vexatious in keeping open, you ought not to cure them, especially if they be small, and terminate in the circumference of the *Anus*.

In which case, if you apprehend that the Orifices of them will swell and not keep open; or that, by reason of the contraction of the *Callus*, the Matter may be streightned, and insinuate it self lower or deeper, and render the Evacuation troublesome; you may then apply a small Caustick upon the Orifice, to remove the *Callus*; after which separation of the Slough, the Orifice may be kept open with more ease as a Fontanel: and for the receiving the Matter, and preventing of Excoriation, the Patient may wear a Pledgit of fine Tow which will fit close without Bandage; or it may be spread thin with any lenient *Unguent*, as the exigency requires, and be kept clean without pain, or considerable trouble, till time shall cure it, or indicate what to do more in it.

Curatives.

But if you design the Cure, and the *Sinus* lie more distant from the *Anus*, you shall begin with laying it open first to the *Anus*, and curing that Aperition before you divide that in *Ano*. Which being done, you shall then consider the Habit of Body; and according as the Humours are peccant in quantity or quality, so you may Let-blood or Purge: but if there be no necessity of either, you shall prescribe your Patient a good Diet, to prevent Fluxion, and especially a *Diarrhœa*; for a Looseness much disturbs the Cure; therefore, in such Cases, you are to forbear the dividing the *Sinus* till that be stopped.

The way of Laying-open the *Fistula in Ano*, is either by Incision or Ligature; the latter was the way of the Ancients, and ought to be proportion'd so as it may divide the *Sinus* with the least Pain: it is made of twisted Brown-thread, or Stitching-silk; some put a Horse-hair to them, whereby they are made to do their work the quicker; a twist of three Threads or of Stitching-silk may be sufficient; for if you make the Ligature big, it will too much bruise the Flesh

in

in cutting it. In the next place, you are to consider the Needle you pass the Ligature with. If the *Fistula* hath penetrated the Intestine, then a Leaden-Probe with an Eye, or of any thing else that is pliant, will serve to carry the Ligature through; it ought to be pliant, that it may perform its work with more ease: a piece of a searching-Candle may serve in some, in others a Probe of small Wire of Silver or Gold; for a present Supply, I have made use of a small Probe out of my Plaister-box, cutting off part of it, and smoothing the end. Where the *Fistula* hath not penetrated, I have, for need, made use of the like Probe, making the Point sharp to pass through the Intestine; but you ought to have Needles more pliant, fit for that work. In some cases, where the *Fistula* lies high, and the *Sinus* crooked, I make use of a fit *Cannula* for the conveying of the Needle up, and to strengthen it in its work, that it do not bend in the perforating the Intestine.

The way by Incision, is with a pair of Scissors to divide the *Sinus*: a way approved by some who have observed the speedy division it makes; and in truth, if the *Sinus* be short, it is the best. In doing thereof, they ought to be careful the while, lest the folds of the rugous Coat fall between, for so you make two Wounds for one. But if the *Fistula* penetrate the Intestine deep, the work will be more hazardous, not only in the cutting, as I said before, but in progress of the Cure; for the recent divided Lips will be apt to fall upon one another again, and then what can hinder their uniting? which if they do, the *Fistula* is renewed; a Dossil or Tent put up the *Sinus* will not continue in it, but lie as a Suppository stimulating the Intestine to excrete it: whereas the Ligature contuses the Lips in cutting them, so that they require to be digested before they can unite, in which time the *Sinus* fills up and heals within; inasmuch as the *Fistula* may be judged to cure above, as the Ligature divides it below. I shall anon give you some Instances of both ways, and leave it to your own Judgments to proceed as you like best. The manner of operation by Ligature, is this:

You shall make a search with a Probe into the *Fistula*, running up by the *Intestinum rectum*, and the while anoint your Finger with a little Oil or Butter and pass it up; and according as you see the Probe more or less distant, or penetrating, proceed in the Cure. If the *Fistula* be streight, and much callous, dilate it first with a *Gentian-root*, or the like, and remove the *Callus* by such *Cathereticks* as have been proposed in the Chapter of *Fistula* in general. But if that side be only callous which is next the Intestine, you may divide that, in laying open the *Fistula*; therefore pass your Ligature with a Needle blunt or sharp, according as the *Fistula* penetrated or not; and as you pass the Needle up with one Hand, turn the point with your Finger which is in *Ano*, and bring it out under that Finger as you thrust it up with the other: and if you pass the Needle through a *Cannula*, you must first pass up the *Cannula*, and place the end of it against your Finger, which is in the *Intestinum rectum*; then another holding the *Cannula*, pass your Needle through it into the Gut; and as it is brought out by your Finger, there slip off the *Cannula*, and hasten the Needle forward on its way, till you have brought it out with the Ligature: then cut off the Needle, and make a knot upon a fold of Linen or bit of Plaister, to prevent the Ligature's cutting the outside, tie it as streight as the Patient can bear, and let the second knot be with a bow: then place the ends of the Ligature on one side, lest it be fouled in going to Stool, and apply a Stupe of Tow dipt in *vino austero*, & *ol. ros.* to calm the heat of the Part. Some make the knot upon a bit of Stick, and twist it daily; but that is more painful, and cuts from without, inward; which is to be avoided. I use to dress them daily after easement of Nature; and, if there be cause, inject *Decoct. hordei cum sem.*

cydon. and apply some Lenient as abovesaid, or *unguent. rosat. popul.* &c. and the fourth day loosen the Ligature by drawing the bow-knot, and tie it streighter: so in twice or thrice tying, the Ligature will cut its way out; or when it is almost through, with a pair of Probe-scissors you may free the residue; or if the *Sinus* run deep under the verge of the *Anus*, that the Lips be like to lie high, so as to make a gutter, it will be better to take them down by the application of a Caustick, for it will much hasten the Cure, and make the *Cicatrix* smooth.

If there be any shrivel'd Piles, *Condylomata*, &c. about the verge of the *Anus*, cut them off at the same time or before you make the Ligature, to prevent the inflation they would be subject to, from the Pain caused by the Ligature or Incision. The *Sinus* laid open, whether it were by Incision or Ligature, the Ulcer requires to be digested, incarned and cicatrized, as hath been shewed in other Ulcers, and shall be more particularly demonstrated in the following Observations.

1. Observat.
of a
Sinuous
Ulcer.

A Young married Wife being diseased in *Ano*, with great Pain and discharge of Matter, advised Midwives and others, who though they could not discover the Cause of her Pain, yet prescribed Medicaments, and kept her long in their hands, to the great encrease of her Malady. At length I was consulted; and discovering nothing outward about the *Anus*, I passed my Finger up into the *Rectum intestinum*; about an inch within, on the left side, I felt a Perforation; I pulled back my Finger, and saw it Mattery: I concluded that was the Orifice of the Ulcer, and supposed its *Sinus* lay amongst the Muscles, and that it took its original from a *Phyma*; which she concealing, as in that modest Sex it frequently happens, the Matter had corroded and penetrated the *Intestinum rectum*, and the adjacent fleshy Parts: I pressed with my Fingers on the outside, where I conjectured the Abscess to lie; and tho' I felt the *Sinus*, I marked the place, and purposed the Opening when it should be desired. At that time my Business was to satisfy the Relations concerning her Disease; which I declared to be an Ulcer in *Ano*; and, for further Proof, offered to Open it in that place I had marked: which they consenting to, I came about ten days after, and applied a Caustick in that very place, in the presence of some of her Kinswomen; and the next day divided the Escar, and passing the Knife down into it, I met with the *Sinus*; and drawing my Incision towards the *Anus* under the *coccyx*, gave vent to the Matter; then passed a Ligature with a blunt-pointed Needle through the *Sinus* into the Gut, and with my Finger in *Ano* bowed the end of the Probe, and as I thrust it in with one Hand, brought it out with my Finger of the other; then cut off the Needle, and tied the Ligature on a fast knot, and dressed the Ulcer with *unguent. basilicon* dipt in a little *ol. ros.* warm. to hasten the separation of the Escar. They continued this way of dressing it daily, till the Escar separated; then I tied the Ligature streighter, and in few days cut it through, and digested the Ulcer with the common Digestive; and deterged, incarned with *mundif. Paracels.* with the addition of *Merc. precipitat.* and afterwards cicatrized it by the help of the Vitriol and Alum-stone firm: since that, she enjoys her Health well.

2. Observat.
of a
Sinuous
Ulcer.

A Gentleman of a full Body, aged about thirty-six years, came to *London*, labouring under various Diseases, as the Gout, Colick and Stone in the Kidney, and a Sinuous Ulcer in *Ano*. Sir *Fra. Prujean* was his Physician, and sent for me. The *Sinus* did stretch it self down from the verge of the *Anus* near the *coccyx*, towards the *perinæum*, about two inches, discharging much Matter. I laid open the *Sinus* with a pair of Probe-scissors to the *Anus*, and dressed it up with the Digestive *ex terebinth.* spread upon Dossils dipt in *pulv. Galeni*, with
Emplastr.

Emplastr. è bolo over it, and Compress and Bandage to retain it on. I afterwards deterged *cum mundis. Paracels.* & *Merc. præcipitat.* with the help of the Vitriol-stone, and with Epuloticks, Unguents, *aq. calcis*, &c. cicatrized that *Sinus* to the verge of the *Anus*: then consulting the Physician in the prosecuting of the Cure, we considered the Patient's ill-habit of Body, and the advantage he might receive in keeping the Ulcer open, as a Fontanel, for the discharge of peccant Humours. This being resolved upon, I advised the Patient to apply upon it a Pledgit of fine soft Tow, morning and evening, or so often as occasion required; it kept on without Bandage, and received the Matter which discharged, and served as a Fontanel, without any disturbance to him in riding or sitting. Thus it was continued some years with great ease and advantage to his health; but since that Physician's death, the Patient was persuaded by others to have it cured. I was sent for, and made a search, and found it had perforated the *Anus* about half an inch within the *Rectum*. I passed a Ligature with a piece of Wax searching-Candle, and tied the Ligature streight upon a fold of Plaister, to prevent the cutting outwardly; then cut off the overplus of the Ligature, applied a Pledgit spread with *unguent. alb. camph.* over all. The Servants renewed the Dressings so often as he went to Stool, and the fourth day I loosened the Bow-knot; and finding the Ligature near passed through, divided it with a pair of Probe-scissors, and dressed it up with the common Digestive: after it was digested, I dressed it with *unguent. diapomph.* upon a Pledgit of Tow, and cleansed the Ulcer daily with *aq. lap. med. crollii*, and in a few days cicatrized it: he returned to his House in the Country; but being a diseased Person, he lived not a year after.

A Person aged about thirty years, of a sickly Constitution, subject to 3. Obser-
Cough and Rheums, being one day costive, and straining to ease Nature, felt ^{vat. of a}
somewhat slip down as it were between the Tunicles of the *Intestinum rectum* ^{Sinuous}
to the verge of the *Anus*, which lay uneasy; he put up his Finger, and felt ^{Ulcer.}
a small Tubercle of the bigness of a large Pea; which encreasing, settled somewhat lower, and made a hard Swelling without the verge of the *Anus* on the right side, and in few days raised it self into a Tumour as big as a Pidgeon's-Egg, and inflamed and suppurated. I was then consulted, and opened it by Caustick, and discharged about two or three spoonfuls of a digested white Matter: after separation of the Escar, finding much Matter discharged out of it, I made a search, and found it run up close along the *Rectum*: I laid it open to the *Anus* by a snip with a pair of Probe-scissors, and dress'd it with a Dossil spread with *unguent. basilicon*, and a Pledgit of soft fine Tow spread with *unguent. album* over it, and in few days cured it to the verge of the *Anus*. Then, considering the Patient labouring under a Cough, with other Obstructions, I proposed to him the continuing this Ulcer open as a Fontanel, till he should recover his health better; and that if he found any inconveniency by it, I would readily cure it. I advised only a Pledgit of Tow to be applied to it, with directions to renew it as he should see cause. I took leave of him; he followed my directions, and finding no inconveniency in riding, walking, or the like, continued it as a Fontanel, to his much advantage; he recovering his health very well afterwards, and is yet alive.

A Gentleman of about forty years old came out of the Country, labouring 4. Obser-
of a *Fistula in Ano*, breaking out on the left side: it arose from a *Phyma*, (I ^{vat. of a}
suppose;) the *Sinus* was large and painful, the Matter having spread under ^{Fistula in}
it. If I had laid this open by Incision, the Lips would have lien hollow, and ^{Ano.}
have rendred the Ulcer slow in curing; therefore I removed them by Caustick, laying the Ulcer open to the *Anus*; and after separation of the Escar, digested, incarned and cicatrized it: then made a search with a Probe, putting my
Finger

Finger in *Ano* the while; and feeling the Probe pass into the Gut about an inch high, I prepared a Ligature, and with a Probe-needle pass'd it up into the Gut; then turned the end of the Needle downward under my Finger, and made a Deligation, as in the like case hath been shewed, and applied a Stupe spread with *unguent. nutritum* over all. The next day dressing it again, I found the Part a little heated; and a Pile that was before the making of the Ligature (lank and withered,) swell'd, and beginning to inflame; wherefore doubting it might be troublesome, I cut it off close by the root, and rubb'd it with the Caustick-stone, to stop the bleeding, and consume the remainder of it. Then I dressed up the Escars with a Pledgit spread with *unguent. basilicon* and the *nutritum* over all. The fifth day I streightned the Ligature again, and dress'd it up with a Stupe spread with *unguent. nutritum*, as before; and, as occasion offer'd, I syringed the Part affected with a *Decoct. bordei*, with a little Syrup *de ros. siccis*. About the tenth day of the Ligature, I observed it cut so near through, as it was easie for me to divide the rest by a snip of a pair of Scissors; yet in consideration that the Ulcer was deep, and consequently the Lips so cut would lie high, and be apt to receive Excrements, which might make it painful and very troublesome, I chose rather to free my self of them by rubbing through them with a Caustick-stone: which having done, and flatted them as I designed, I pulled the Ligature to me, and the while passed my Probe-scissors under, and divided the *Sinus*; and pulling away the Ligature uncut, dressed up the Ulcer, with a Pledgit dipt in *basilicon* warm, and applied a Stupe wrung out of red-Wine over it. After separation of the Escar, I incarned and cicatrized with *unguent. tutiæ*, &c. as aforesaid.

5. Obser-
vat. of an
Ulcer in
Ano.

A Gentleman of about forty years of age, having laboured long under Chronick Diseases, with great irregularity in Diet, &c. during which, Nature, to ease herself, discharged some part of the Disease in an Abscess in his left Inguen, and another in *Ano*. This latter discharged a great quantity of Matter daily, and was exasperated by a *Diarrhæa*. The former in *Inguine*, (he not permitting it to be opened by his Chirurgion) had made its way through the Skin in many little openings, and lay ulcerated under it about three inches in length, and in no condition to cure. Dr. Tern was his Physician, and, by his Prescriptions, had opposed the various Symptoms that threatned the life of the Patient; but the Patient being ungovernable, I was called in, and seeing him much emaciated and cachectick, not likely to be cured till he should attain a better habit of Body, purposed to palliate these Ulcers a while: that in *Inguine*, by dressing it with Pledgits of *unguent. diapomph.* and *cerat. dialthææ* over it, whereby the Matter might be moderately discharged, and the Tumour mollified, and rendred less subject to Fluxion. The Sinuous Ulcer in *Ano* was not capable of healing, while he laboured under such a *Diarrhæa*; but that it might be the better disposed thereto, I laid the *Sinus* open by Ligature, and thereby freed the tender Lips from the Excoriations they were before subject to; it was dressed with Lenients, and thereby the Matter was discharged with more ease, and the Ulcer dispos'd to cure, when Nature should be that way enclined: which, that it might the sooner be so, his Physician prescribed this Traumatick Decoction; *R. fol. mellefolii M. ij. veronic. bugul. sanic. alchymil. flor. hyper. an. P. j. glycyrrhiz. ʒij. coq. in aq. font. ad. ℥ij. in colat. dissolv. syr. è symphyt. Fernel. ʒij. bibat. ʒiv. ter in die horris Medicinalibus.* Also these Balsamick Pills; *R. terebinth. Chia ʒij. bezoard. mineral. ʒj. balsam. solut. ʒiv. glycyrrhiz. pulv. ʒj. fiat pilul. sumat ʒss. quotidie manè & vesperi.* In the time of his *Diarrhæa* his Physician prescribed this; *R. rhei elect. parum torrefact. & aq. cinam. irrorat. ʒss. salis tartari gr. iij. conf. ros. rub. gr. xxv. M. fiat bolus quem sumat manè per triduum.* This Julep was also prescribed him; *R. aq. cinamomi hordeat. menthæ crisp. an ʒiv.*

Spir.

spir. menth. 3ij. *styr. è corallis camph.* 3x. *M. de quo bibat. coch.* iij. *pro re nata.* Also this Antiscorbutick; *B. aq. cinam. tenuior. succ. cochlear. hortens. an.* 3vj. *sacchar. cryst.* 3viij. *digeratur in balneo, sumat cochlear. in sing. haust. potus ordinarii.* At other times he took *calomel. gr. xx. in conf. ros. rub.* 3ß. The Patient thus supplied with different Prescriptions, according to the Exigency; the Spring coming on, he retired to Chelsey; where following the method prescribed, he recover'd strength, and the discharge of Matter lessened; and consequently his Ulcers became so well-condition'd, as his Friends and Servants about him were capable of dressing him, and in few months he grew more healthful and fat. That Abscess in his Groin healed up by the Medicaments afore-mention'd, but that *Fistula in Ano* we thought fit to continue as a Fontanel for his health-sake; which he kept easie, by wearing a Pledgit of fine Tow on it, till at length it healed up of it self: he is now grown fat.

A Woman aged about thirty-four years, diseased with a *Fistula in Ano*, having tried unsuccessfully the Endeavours of such Medicaments as those of her own Sex could advise her; at the last sent for me. It took its original from a *Phyma in Ano*, which had passed its Matter in a *Sinus* down to the *Perinaum*. I laid open the Ulcer to the verge of the *Anus*, and cut off a wither'd Pile that was swell'd (from the anguish of the Ulcer) to prevent its further inflaming; then applied a Pledgit dipt in *album. ovi*, & *cum pulv. Galeni*, and a Stupe of Tow spread with an Astringent over it with Bandage. The next day I dress'd her with a Digestive of *basilicon*, and a Pledgit of *unguent. nutritum* over it; and left her Dressings, and visited her my self once in three or four days. That Ulcer being cured, to the *Fistula* I made a search with a Probe, and pass'd my Finger up in *Ano*, and felt the Probe about three-quarters of an inch within, but not penetrating: The *Sinus* was small, wherefore I put up a Gentian-tent, with a string fastned to it; and left them some of the same sort to put up daily, to dilate it. The third day after they sent for me again; they had thrust the Tent too far, so that in pulling it out the String came away, leaving the Tent behind. I anointed my Finger with a little Butter, and thrust it up the Intestine higher than the *Sinus*; then drawing my Finger back over the *Sinus*, I thrust the Tent out; then laid open this *Fistula* by Incision with a pair of Probe-scissors, passing one shaft into the *Sinus*, and the other with my Finger in *Anum*, guiding it up the height, and with one snip laid the *Fistula* open; then applied a Dossil spread with a mixture of *pulv. Galeni cum albumine ovi*, and bound it up with a Stupe spread with *unguent. nutritum*, and left her Dressings with directions how to apply them. I presumed, by this way of Incision, the Cure would be the sooner effected, and with fewer visits from me: but the *Sinus* fill'd up with loose Flesh; and the Dossils I left them to cicatrize it with, commonly slip out of the *Sinus*, and lay uneasie, not unlike a Suppository, putting her upon a *Tenesmus*; and if the Injections were any thing absterfive, they did the same: so that, to hasten the Cure, I was obliged to dress it my self, and dry the loose Flesh by rubbing the *Sinus* with the Vitriol-stone; by which, and the Alumestone, I at last cicatrized it.

A Gentleman aged about forty-four years, having long laboured with a *Fistula in Ano*, and a Tumour in *Perinaeo*, growing at last extremely diseased with it, was brought up to London, and sent for me. The Tumour was in *Perinaeo*, big, and seemed to me callous; it reached from the *Anus* to the *Scrotum*; and by the Matter I saw discharged from the *Anus*, I concluded the Tumour was made by its insinuating it self downward, and that, through length of time, it was grown callous. The Compression it made upon the *Ductus urinarius*, caused a difficulty in Urine; upon which account my speedy help was required. I began the Cure by laying this *Sinus* open by Incision, from the *Scrotum* towards

6. Observed
vat. of a
Fistula in
Ano.

7. Observed
vat. of a
Fistula in
Ano.

wards the *Anus* : in cutting it, I found the *Sinus* small, and the Matter in it little and thin, rather an Ichor ; but the Lips were hard and thick, and did not much separate one from another : wherefore having applied a Dossil spread with *unguent. basilicon* in the bottom of the *Sinus* to defend it, I applied a Caustick-stone on each Lip, from the *Scrotum* upwards, and some hours after took it off ; and finding it had penetrated the *Callus*, as I designed, I bathed it with *Decoct. malvæ*, &c. and dressed it up with Lenients : after the separation of the Escars, I found that Part freed of the *Callus*. I digested it with *basilicon* and *precipitat.* and with *unguent. diapompholyg.* healed that Part : then applied a Caustick upon the remainder reaching to the verge of the *Anus*, and freed that also of its *Callus*, and disposed it to cicatrize : which while I was doing, I made search with a Probe, passing it into the *Anus*, where I quickly discovered that about half an inch high the *Sinus* opened into the Intestine. It had run deep all the way, and here it lay deeper, and more callous. Upon which consideration, I passed up a *Speculum ani*, and, during the dilatation, laid it open with a Caustick-stone in my hand by rubbing it ; then wash'd out the Salts, and cut through the upper part of the *Fistula* with a pair of Probe-scissors ; that done, I injected some *ol. lini* to hasten the fall of the Escars : which being separated, I digested it with *unguent. basilicon* and *precipitat.* and dried the Ulcer with the Vitriol-stone and Pledgits dipt in *aq. aluminis*, and cicatrized it firm, and returned him cured in few weeks.

8. Observat. of a *Fistula* in *Ano.*

I was fetch'd to a Gentleman aged about fifty years, who had been long diseased with the *Hæmorrhoides*, and several Apostemations the space of twenty-two years ; the Matter had passed through the *Intestinum rectum* into the *Musculi glutei*, making various Fistulous Ulcers, but one in *Perinæo*, which, through length of time, was encreased to a great bigness, and reached to the *Scrotum*. I began with that, by the application of a Caustick from the *Scrotum* upward, and divided the Escar ; there issued out only a little foul Gleet, which had flowed into it from within the *Intestinum rectum*. I dressed this Escar with Lenients, as in the former Observation hath been shewed : and as it separated with the *Callus*, the *Sinus* appeared dry and hardned with thick Lips, lying not unlike a trough : therein appeared many Excrescences, which put me upon the use of Escaroticks, viz. the Caustick-stone, Precipitate, Alume, &c. Also by the use of the Vitriol-stone I rubbed them off, and disposed the Ulcer to cicatrize : then I applied a Caustick to the remaining *Callus*, which run up from thence to the *Anus*, the Pain whereof stirred up a Swelling in some withered Piles. To prevent their inflaming, and to put them out of my way, I snipt them off close by the roots ; and after they had bled a while, I rubb'd them with a Caustick-stone, and dressed them up with a Stupe of fine Tow, spread with *unguent. basilicon* : having digested these, and disposed this part of the *Sinus* to cure, and the lower-part (which I first began with) being cured, I made a search into the remaining *Sinus's*, which lay on each side the *Anus* ; those I opened by Incision and Caustick, digested and cured them. Then I made a search into the great *Fistula*, which had penetrated the *Rectum*, about three-quarters of an inch within, and passed a Ligature through it, and tied it streight. The while it was dividing, I fomented the *Anus* with red-Wine daily, and cast up lenient Injections, to ease the Pain, and cleanse it : and after I found the Ligature had made its way near out, I loosned it, and with a Caustick-stone rubb'd the remaining *Callus* off ; for that by Incision it would have been long digesting, and the *Sinus* would have lain deep, and the Lips troublesome after the Cure. The *Callus* divided, and the Ligature came way ; the Escar separated by Lenients, and the Ulcer cicatrized : in very few days the bottom of the *Sinus* having been hardned by the *Callus*, remained as a small gutter,

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in spite of my endeavours to the contrary; but it proved no great inconvenience to the Patient, he being perfectly well, and from that time following his Employment daily abroad.

A Gentleman of about forty years of age, a strong healthful Person, of a 9. Observat. of a Fistula in Ano. Plethorique Body, after a hard riding in hunting, was seized with a pain in the *Intestinum rectum*; and a few days after with a Swelling and Inflammation about the *Anus*, which terminated in an Abscess, and was opened on the left side near the *Perinæum*. After two years the Abscess remaining uncured, the Patient came to *London*, and put himself into the hands of Sir *Fr. Prajean*, who recommended him to me: Sir *Charles Scarborough*, since Physician to his Majesty, and to his Royal Highness the Duke of *Tork*, as also Doctor *Warner* were some time consulted. There were two Sinuous Ulcers, one on the left, and the other on the right side of the *Perinæum*; they had both communication with one another near the *Anus*, and passed up between the *Anus* and Bladder as we supposed, for we could not make a search far up, till these were laid open: to which purpose I hastened the dilatation of them by *Gentian-roots*. &c. and afterwards with Caustick and Scissors laid them both open; then by Digestion disposed them to cure. That effected we met again, and I made a search with a Probe up the main *Sinus*, and discovered it running between the neck of the Bladder and *Intestinum rectum* above an inch high, but could not feel the Probe with my Finger in *Ano*. it was hoped the *Sinus* reached no further, but pulling out the Probe bending it, and I passed it up again by the rub I met with before, and discovered the *Fistula* at least half an inch higher; and by pressing the end of the Probe towards the side of the Intestine, I did with my Finger there feel, as I thought, the end of the Probe, but at a great distance off, by which I well perceived it would be a difficult work to penetrate it, and bring the Needle out with my Finger, the *Sinus* being so high as I could scarce reach the end of the Probe with my Fingers end. It lay off such a distance from the Intestine as I could not pass a small Needle without a *Cannula*, and a bigger which was proper for the penetration of the Gut, would not ply enough to be returned out with my Finger by the *Anus*; and to lay a *Sinus* open of that length and thickness by a pair of Probe-scissors, was very improbable; wherefore I resolved to dilate it, and try how I could digest off the *Callus*. To which purpose I dressed it daily with a Tent made of a *Gentian-root*, and afterwards endeavoured to consume the *Callus* by Tents made with Lint, and the white of an Egg crusted with a mixture of *Merc. præcipitat.* and *alumen. ust.* over which I applied a Pledgit of *unguent. basilicon*, and a Stupe of fine Tow spread with a mixture of *unguent. nutritum* & *popul.* over that: from that time I fomented the pained part daily with an Emollient Decoction, and repeated the Lenient Applications, but removed not the Tent till it separated with its sloughs. Having thus wasted the *Callus*, I left off the use of those Tents and dressed it with others armed with Digestives, and shortened these daily: during this work the Patient drank a vulnerary Decoction, and took such Balsamicks as the Physician judged necessary. After I saw the *Sinus* well digested and but little Matter, I left off the use of the Tent (lest by keeping it longer open it should skin again within) and in few days cicatrized it, but some while after it brake out again; and upon search I found the *Sinus* open as at first. I attempted the wasting the *Callus* again; but seeing no good come of it, I tried by an Injection of *aq. lap. Medicament.* but that only shrivell'd up the *Sinus* and might have been of good use to palliate; but my work being to cure, I dilated the *Fistula* with *rad. gentianæ* in order to the laying it open; and then calling in a Chirurgeon well experienced in this Art, who met the Physicians and my self, he made a search and concluded the way by Ligature

proper. The Patient being prepared for the work, laid himself over a Chair: but when I came to pass up the *Cannula*, the Patient grew so unquiet as my brother Chirurgeon desired me to forbear, he supposing by the Patients complaint that it was cancerous; and advised me to proceed in the Cure by Injections, which I having no faith in, desired the Patient that my Brother Chirurgeon might bring his Injection, and dress the *Fistula* for some time which accordingly he did some days; but seeing it unsuccessful, he then advised the Patient to retire into the Country, and content himself with a palliative Cure. But the Patient being sensible enough that the Cure was feasible, if he could once resolve upon it; wherefore he dismissed the Chirurgeon, and sometime after took new resolutions and sent for another, who was no less eminent in this Cure than the other; he came and made a search, and approved of the dividing the *Fistula* by Ligature, and commended the way as both safe and easie: a day was prefixed, and the while I dilated again the *Sinus* with *Gentian-roots*. The day the Operation was to be performed, the Patient dined abroad and when we met and placed him in the light to proceed in our work, the *Gentian-tent* was fallen out, and the *Sinus* was closing; but we being resolved not to lose that opportunity, I dipt the *Cannula* in Oil, and passed it up about an inch, but then meeting with the old rub, the Patient began to be troublesome, and would have persuaded us to desist. The Chirurgeon supposing I was at the height, advised me to pass the Needle; but I knowing the *Sinus* reached further, and the inconvenience which might happen in the Cure by doing so, minded him not, but pushing the *Cannula* upward as I had designed, till I felt the end of it with my Finger, which was the while in *Ano*: that done I put the *Cannula* into my brother Chirurgeons hand to hold there, while I passed the Needle into it, and through the Intestine to my Finger within, with which I bended the point of the Needle, and drew it out of the *Anus* with the Ligature hanging at it. I then cut off the Needle with part of the Ligature, and having applied a sold of Plaister on the Place, I tied the Ligature streight, and fastned it with a bow-knot, and applied a Stupe of fine Tow, spread with a mixture of *unguent. popul.* and *nutritum* over it. The Patient being drest threw himself upon his Bed, my brother Chirurgeon told him the work was well done, and that he ought to account that day, as the day of his Birth, there being no hopes of Cure any other way; so took his leave. The Patient rested very ill that night, and was the next day feverish, and continued restless by reason of the pain, notwithstanding all my endeavours by Lenients. The third day after I was sent for in great haste, he being dying as they said; I found him shrewdly alarm'd, he had newly voided three or four spoonfuls of Matter (as they called it) in his Urine; upon which it was concluded by them that I had wounded his Bladder in passing the Needle, and that I had passed it farther than my brother Chirurgeon advised. I was somewhat surprized at their Language, and replied, there was a necessity of laying open the *Fistula* the whole length: looking into the Urinal I saw such a quantity of thick Matterly substance, but could not imagine how I should hurt the Bladder in passing the Needle; but there was no answering them. I carried the Urinal to Sir *Fr. Pruj.* he caused some of it be heated in a spoon over a Candle, where it hardned, by which we were assured it was not Matter; he concluded it made in the Bladder, by the heat and disturbance it had received from the Neighbouring parts. I returned to my Patient with the Physicians answer, which somewhat quieted them; but that expression of my brother Chirurgeon had done me some prejudice, if the Patient had not recovered. Thus it usually happens amongst us in Operations, where they prove unsuccessful. From that time the Ligature made its way more easily, I taking more time in the curing

ring through the *Callus*, by which compliance it was about sixteen days cutting its way out; all which time Injections were cast up after his going to Stool, and the Part affected was treated with Fomentations and Lenients, and at length the Ligature made its own way out: during which the *Sinus* above cured, so as I had nothing to do but to cicatrize the outmost part, which I did with Lotions and Pledgits dipt in *aq. calcis*, &c. in a few days after; and the Patient returned joyfully to his sports in the Country, and relapsed no more.

I was sent for to a Gentleman of about thirty six years old, much emaciated and of a very ill Habit of Body; he was diseased with a painful Tumour on the left side of the *Anus*, reaching from the *Os coccyx* to the *Perinæum*, of a dark red colour hard in the circumference, but along the verge of the *Anus*, it felt soft; it seemed to arise from under the *Anus*, and to be an ill-conditioned Tumour: I applied a Caustick upon the soft part according to the length of it near the *Anus*, and some hours after divided the Escar, and gave vent to a fetid brown Matter. I dressed the Escar with *unguent. basilicon cum oleo terebinth.* and applied a Cataplasim over it of *far. fabar. pulv. sem. sænug. lini, flor. chamomel. sambuci, ros. rub.* decocted in *oxymel*; as the Escar separated, the Ulcer shewed it self putrid. I fomented it with a *lixivium* wherein good store of wormwood had been boiled, and dressed the Ulcer with *mundif. Paracels. cum præcipitat. & alum.* and the Escar with Lenients, &c. as before.

10. Observat. of a putrid and fistulous Ulcer in Ano.

This Patient had laboured some weeks of a *Diarrhæa*, which after the Escar was separated flowed into the Ulcer, and much disturbed our Cure; therefore I caused an Injection to be made of a *Decoct. absinth. hyperici, scord. centaur. &c.* to which I added *spir. vini, mell. ros.* and *unguent. Ægyptiaci*; and that the Excrements or *sordes* might not be retained, and render the Ulcer more sinuous, I cut it open the whole length above and below, and fill'd it up with *Merc. præcipitat.* with the *mundificative* upon Dossils, and with Plaster and Bandage retained them on. Then prescribed him a *Decoct. farsap. &c.* also an Electuary of *cons. ros. rub. diascord. & rhei torrefact. &c.* which he took once in four hours, and thereby stopped his looseness. The Ulcer not deterging with the former applications, I dressed it with *pulv. Jo. Arden.* and defended the Lips with *unguent. basilicon*, and an *Emplastr. è bolo* over all. Thus in two or three dressings I consumed the *sordes*, then dressed it with *mundif. Paracels.* and *præcipitate*; and applied Stupes of Tow over it prest out of red Wine, wherein had been infused *flor. ros. rub. balaust. &c.* and afterwards prescribed him the taking of *calomel. ʒj.* every other night. Thus the Ulcer deterged, I incarned it with *pulv. aloes hepat. myrrhæ, sarcocol. rad. aristoloch. rot. ireos florent. lap. calamin.* made up into the form of an Unguent with *mell. ros.* While this was incarning, and in some parts cicatrized, a *Sinus* appeared running under the verge of the *Anus* about half an inch; I applied a Tent armed with the *mundif. Paracels.* and after it was deterged, left out the Tent and it cured. But then a small *Sinus* discovered it self on the other side of the *Anus*; upon sight thereof, lest more mischief should fall upon those weak parts, (whilst I attended the cure of that Sinuous Ulcer under the *Anus*) I dilated it, and snipt it open with a pair of Probe-scissors into that great *Sinus*, and from that time the Ulcer cured and I thought my work had been done: but within a few days after another *Sinus* appeared near the verge of the *Anus* on that side where the former was; it much discouraged the Patient, but it lying so convenient for discharge of the peccant Matter, I continued it to further consideration, it proceeding from the meer weakness of the Part. I advised the keeping it clean, and to wear a dry Pledgit of Tow over it: It was kept with much ease, and the Patient enjoyed his health very well many years, and at length it cured of it self.

11. Observat. of an Ulcer in intestino recto with stricture of the Anus.

A Person of Honour having some months laboured (as was supposed) under the Piles, being extréamly wasted with the pain and accidents which attended it, sent for me to consult with his Chirurgion; I went, and there I also met Dr. *Tho. Cox* his Physician. The Patient discharged a purulent Matter *per Anum* as he lay in his bed, and in each Stool a great quantity came away with his Excrements; on the left side of the *Anus* lay an Abscess perfectly suppured, to which we presently applied a Caustick, and gave vent to a digested Matter. I then made a search with a Probe, and the while passing my Finger in *Ano*, felt the Probe in the *Intestinum rectum* about an inch deep; I pulled it out and endeavoured by my Finger in *Ano* to find what *Sinus* or cavities there were, and felt one above the *Sphincter* in that part of the Gut lying next the Bladder: I supposed the Abscess was there, and that the Matter from thence had insinuated it self amongst the Muscles, and made that Tumour outwardly, which we had opened by Caustick. What it was that gave original to that Ulcer, was not easie for me to determine, whether it was a *Phyma*, or a translation of Matter from some other part: However it was, the Cure was difficult and depended upon a rectifying the Habit of body, it being by what I then felt out of our reach to lay more open; nor did I think it safe to be over-hasty in injecting Liquors there, I always suspecting the seminal Vessels concerned in those Abscesses, in which cases Injections may dilate the Ulcer, and hasten its penetration into the *Pelvis*; therefore we dressed it up with Lenients to hasten separation of the Escar: after the Escar separated, we made a search with a bended Probe, and turning it upward, found a Cavity amongst the Muscles on that side; by which it seemed to us, that the laying that *Sinus* open into the former would be of no great advantage, we thereby could only divide the upper part of the Abscess, and so to make the first Orifice wider: yet it seeming somewhat advantageous to the discharge of Matter, we passed a Ligature through and in few days divided that *Sinus*, and soon after cured it again; for the discharge of Matter continued very great *per Anum*. The Patient continuing weak and more indisposed, Sir *Alex. Frazer* was consulted, who seeing such a discharge of Matter *per Anum*, concluded that an opening ought there to be made in some external part; we had several times endeavoured to find some place amongst the external Muscles of the *Anus* and *Glutei*: and now again we raised the Patient upon his Knees in Bed to search, but we could not by Fluctuation or otherwise discover ought, whereby we might be encouraged to apply a Caustick; whilst he was in this posture, the Matter poured forth, as also when he lay down in his Bed it came involuntarily out. We having in a former search with a bended Probe, discovered a cavity amongst these Muscles beneath the former Abscess, it was resolved that an opening should be made there; but that cavity lay at such a distance within, that it was not easie to reach it by Caustick: wherefore I having at my house an Instrument proper to open Sinuous Ulcers so lodged, I sent for an Instrument-maker, who upon sight of that and the Cavity we designed to pierce, fitted us with one somewhat like a crooked *Forceps*; one leg whereof we passed into the *Anus*, which being crooked turned up into the Cavity, and being there, the other shaft having a sharp blade in the form of a great Lancet fixed in it, would at our pleasure cut in upon the other, which was the Director: thus we cut into the Buttock from without inward, and that we might not lose the opening we had made, we presently passed a *Fistula*-needle through it with a Ligature which we brought ought *per Anum*; and having tied the ends together, we fastned it on one side with a snip of Plaister, and dressed up the wound with a proportionable Tent armed with a Digestive. From that time we dilated it daily towards the Buttock, to try whether the Matter would that way discharge

charge. The Physicians prescribed vulnerary Drinks, Balsamicks; Cordial Bolus's and Juleps were also prescribed, Lenients to appease the *Tenesmus*, and somewhat of Injections we considered of to cast up in some little quantity to heal the Abscess which lay above the *Sphincter*. After we had some-while continued that opening last made, and observed it painful, and not to empty the Matter, nor divert it from flowing its wonted way, we cut it down to the *Anus* and cured it. From that time we applied our endeavours to cure the Ulcer within, whence (it was most certain) all the abundance of Matter issued. The method used was by detergent Injections, such as have been propoted in the Chapter of Sinuous Ulcers; but without acrimony to avoid a *Tenesmus*, and in small quantity at a time lest it should be retained and render the Ulcer more Sinuous. After we had thus spent some time successfully, and by the Physicians help removed the severer accidents; it was resolved (the weather growing warmer) that the Patient should remove to *Kensington*, and take the benefit of the fresh air, and observe a Milk-Diet, and prosecute his Cure there. Whilst the Patient was weak and kept his Bed, and was vexed with *Diarrhæas*, &c. we could not observe any want he had of the retentive faculty; but being in the Country somewhat recovered, and walking daily abroad he complained that he could not retain his Excrements, they pressing almost continually forth. We went on with our method in curing the Ulcer and accordingly it contracted daily narrower, and the discharge of Matter grew less; but as the Ulcer cicatrized, he found his Excrements did not come away, but with great straining, and those that came away, were small like Earth worms: he also complaining of frequent pain in his Hips and *Os sacrum*, sent for his Chirurgion and my self; we went and prevailed with him, to let us put up our Fingers dipt in a little Oil, upon search we found a stop about an inch or more within the *Rectum*, the Gut purled up so close, that I could not get in my Fore-finger to the first joint. This was by reason of the *cicatrix*; we caused presently a Decoction to be made of *rad. lilior. albor. althææ, sem. lini & hordei*, to which was added some *ol. exped. bovinis*, and injected some of it: we directed the repeating of it often in a day, and to permit a Syringe full to be cast in at his going to sleep at night; we afterwards dilated it with Tents of *Gentian roots*, and between while others of Deer-suet, some whereof were fitted with strings. A consultation was also resolved on for the Physicians to meet us, at which time we came provided with a *spec. Ani*, &c. in order to the dilating of the stricture: but the Patient would not admit it, he being eased by the use of the Emollient Decoction; but replied, if it again contracted, he would come to Town and be governed by us. Some months after, the Winter approaching, he returned to Town; his Excrements were suppressed, and his Belly swelling, his Urine also high-coloured and near suppressed: his Physicians prescribed him a Clyster that Evening, and a Purging-Draught of *Decoct. cassiæ, tamarind.* &c. he omitted the taking of the Clyster, but took the Purge the next morning, which bearing down the Excrements so over-distended the *Colon*, that the way between that and the *Stricture* being choaked up by them, the Patient fell in a cold Sweat, and frequent fainting; but by laying him in his Bed, and Cordials, he was somewhat relieved, and at last the Physick worked through him, and he grew better; and from that time he was more governable, and admitted of Clysters before Purging, both which he often repeated. We together prosecuted the Cure by internal Medicaments, such as by their vertue restored the Patient to a better Habit of body: our work was the dividing the contracted *Callus*, which made the *Stricture*, which we did by an Instrument made for that purpose, with which without hurting the Intestine we cut through in several places, making the opening so large that

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the Excrements came away big; and by the injecting of *ol. lubricorum*; cured the wounds in few days after, and left him at liberty, he not only expelling them well, but also retaining them: Yet within this twelve-month twice, we have enlarged it, and by the Instrument we designed, it may at any time be helped without hazard of wounding the sound parts near it; but since the last Incision of it, *February 1673.* it hath continued open, and upon a late search with my Finger I could feel nothing of it.

12. Observat. of a Sinuous Ulcer near the Anus.

A young Fellow of about thirty six years old, and Servant to a person of Honour in the Country, was sent to Town; he had been long diseased with a supposed *Fistula in Ano*, it was on the right side near the *Podex*, the Ulcer was sordid and with round callous Lips. I made a search and found it run under the verge of the *Anus*, but not penetrating it. He had been long diseased of the *Kings-Evil*, there being many *Scrophulæ* on both sides of his Neck. I rubb'd the *sordes* and putrid flesh with the Vitriol-stone, and then filled it with *Merc. præcipitat.* with Pledgits of Lint close over it. Then applied some of my caustick Unguent upon a Pledgit round over the callous Lips, and with an *Emplastr. è bolo*, and Bandage bound it up. The next day I took off the Caustick and found it had worked as I designed: I dressed it with Lenients to hasten separation of the Escar. This poor man had heretofore been subject to the *Hæmorrhoids*; from which disease some withered Piles remained hanging upon the verge of the *Anus*, which upon the application of the fore-mentioned Escaroticks and Causticks, began to heat and swell: I presently cut them off with a pair of Scissors, and after they had bled a while, dressed them with *pulv. Galeni*, and afterwards cicatrized them by the use of the Vitriol-stone and common Epuloticks. During which I cleansed the Ulcer of its *sordes*, and endeavoured to lay a *basis* with *mundif. Paracels.* &c. for incarnating the Ulcer; but while I was so doing, I observed a great quantity of corrupt Matter flowing again down upon the Ulcer: upon search I found a *Sinus* run towards the *Os sacrum* a great length, and so deep as gave me small hopes of laying it open. The next Dressing I was provided with vulnerary Injections such as have been set down in Sinuous Ulcers, and dressed him up with Deterfives, and prescribed him such Physick as might have regard to his Scrophulous Habit of Body. While I was thus treating him, he began to be troubled with a Cough which he had been frequently subject to in the Country, upon which account Pectorals were prescribed, and he was thereby relieved. The cure of the Ulcer not succeeding, I applied a Caustick upon the upper part of the *Sinus* between the *Os sacrum* and the *Os coccyx*, and passed in my Director at the same time, and cut through the Escar into it, designing by this opening to intercept the Humour flowing downward to the Ulcer, but the while he was taken again with a shortness of breath: I let him Blood, and repeated the use of Lohocks and Cordials, with Spirit of Saffron, &c. but he took his Bed and died the third day after. I having leave to open him, desired Doctor *Walter Needham* his assistance in finding out the Cause of his death; we found all the *Glandules* within very Scrophulous, those that lay upon the *Iliack* Vessels ulcerated, from whence flowed a great quantity of Matter down into the *Pelvis*, thence insinuating it self amongst the Muscles, and so to the place where I had applied my Caustick, and from thence to the Ulcer near the *Anus*: his Lungs were also stuf with *Strumæ*, and the *Viscera* all very bad.

This Observation being indeed strumous, should have been placed in that Treatise; yet notwithstanding I thought it fit to insert it here, that the young Chirurgeons, when they meet with such sordid Ulcers, with extraordinary discharge of Matter, may learn to suspect some extraordinary cause within.

A Lady

A Lady of about sixty eight years of age, a lean withered Body, subject many years to the *Hæmorrhoids*, which in her declining years grew more painful, and at last afflicted her night and day, and being without hopes of relief from the several applications prescribed her, was persuaded to admit of a Chirurgeon: She sent for me, I heard her roaring before I came into her Chamber. On the lower part of the verge of the *Anus*, next the *Perinæum*, was a Swelling as big as a Pheasants Egg, it seemed to be the inflation of the rugous coat, but was hard and of a livid colour; but that which she most complained of was within, which I could not come to see nor yet feel: by pressing this downward, I saw a foul Matter, and as I thought a large Ulcer; I caused a Syringe to be fetched, and some *mel. ros.* which I mixed with some Chicken-broth and cast it up, and brought away some Excrements, and foul *mucus*: I caused a Fomentation to be made of *fol. verbasci, solani, plantag. an. M. j. sem. lini, 3j. sem. cydon. 3ss. sem. psyllii 3ij. flor. nymph. & ros. rub. an. P. j.* boiled in Wine and Water, by which it was often stuped in a day; also a mucilage with some of the cold Seeds with *sem. papaver. alb. hyosciam psyllii*, were thrown up to quiet the pain within. Emollient Clysters were also sometimes injected with a Syringe, having a short thick taper-Pipe; lenient Cerôts were outwardly applied, made of some of those above-said mucilages *cum sevo cervin. vitulin. vitell. ovar. croco & opio, cum ol. lumbric. & cera alb.* By these Medicaments I somewhat relieved the Patient, and got so much credit with her, as I hoped to have liberty to take off this Tumour by one way or other. Some while after I did apply a Caustick, and removed the upper part of it, as I designed: there came nothing out of it, but it was so levell'd, that I could with the help of a *Spatula* look into the *Anus*, where at some distance I saw little hard Excrecences like *Thymi* standing stiff up; these were they which gave her so continual pain, especially in the easing of nature. There was also a sordid Ulcer between them and the external Tubercle, (to which I had applied the Caustick:) it was not easie for me to extirpate the *Thymi* till I had quite removed this Tumour without; whereupon I presently rubb'd it with a Caustick-stone, and laid it flat, and wash't it with the Emollient Decoction: then scarified the Escar, and fill'd it with *Merc. præcipitat.* and dress'd it up with Lenients; afterwards I worked it down, and smoothen'd it with the Vitriol-stone, and cicatrized it with Epuloticks, the Alume-stone, &c. This removed I began with those *Thymi*, which if I might have had my own way, should have been treated by the actual Caution; but I did not mention it, nor did I acquaint them with what I intended to do, but placed her towards the light, and pass'd a Scoup-like Instrument up into the *Anus*, then having a Caustick-stone fixed in a convenient Instrument, I press'd upon the head of the nearest *Thymus*, and as the Salts melted, dried them up with an Armed-Probe, and continued the work till I had quite extirpated it; then cast up some of an Emollient Decoction with a little *ol. Hyperic.* by which the pain was asswaged; after the Escars cast off, I toucht them with *sp. vitriol.* and afterwards with the Vitriol-stone and cicatrized it, then dress'd the sordid Ulcer with Detergents stronger or weaker as it would bear; by which I cleans'd it well, and dispos'd it to Cure by injecting *aq. calcis*, &c. During which I attempted the extirpation of the other *Thymi* with Caustick-stones, and thought I had eradicated them; but some time after they rose again, and in truth did so often, and proved vexatious to the Patient, and troublesome to me: Yet at last after a years attendance they wore off, and the pain ceased. She lived many years afterwards as happily as any person of her age.

14. Obser-
vat. of a
Cancer in
Ano.

A Free-holder about fifty fours years old, much emaciated, having laboured many years under the *Hæmorrhoids*, and Apostemations within the *Anus*; at last being tormented excessively with pain, and not able to ease nature, he came to *London* in a Litter. He sent for me supposing that he had a *Fistula in Ano*; I looked and saw the verge of the *Anus* callous, then searching with my Finger, I felt a large cancerate Ulcer within the *Rectum*, lying under the *Os coccyx*, and possessing the parts round with hard Lips; also a large Excrecence, growing upon the lower part of the said Intestine about an inch and a half within, so that there was but a small passage for discharge of Excrements.

This was an inveterate *Cancer*, an not likely to yield any thing to Palliatives: I would gladly have been rid of him, but he would be my Patient, protesting that he could not live unless way were made for the more easie disburthening of nature; to which purpose he implored my speedy help. I perceived his lamentable condition, and his resolution to have somewhat attempted, desired him to consult some eminent Physicians and Chirurgeons; he assented to it and made choice of Doctor *Tho. Cox*, and Mr. *Hollyer* Chirurgeon. We met at his Chamber the next day and made a search, and concluded it an inveterate *Cancer* incapable of Cure: but the Patient declared, he came to Town with resolution to be cured or die, and would have it attempted. We at his importunity complied, and resolved upon the use of the actual Cautery, as being the only way whereby we could hope to extirpate these Excrecences and callous Lips; he was well pleased with our proposals, and desired we would meet again with what expedition might be. The second day after we met and came provided with an actual Cautery of the fashion of a bolt, with a *Cannula* having a hole cut in it to receive that great Excrecence near the *Sphincter*: a mucilaginous Decoction was also prepared *ex summitat. malvæ, viol. sem. cyeon psyllii, &c. in ac. bordei.* The Cautery being ready, and a bason of Water with Sponges to cool it, the Patient rose out of his Bed, and placed himself towards the light, leaning upon the side of his Bed without any body to hold him. I anointed the *Cannula* with *unguent. refrigerans Galeni*, and passed it up, placing the opening in the *Cannula* upon the Excrecence; then passed in an actual Cautery glowing hot, and repeated the use of it so often, till the Physician and Mr. *Hollyer* judged the Excrecence and callous Lips consumed; Mr. *Hollyer* putting his Finger in after the passing each Cautery, the *Cannula* being the while taken out often and cooled in Water. The work done, Injections were cast in, and the burnt parts dressed with Lenients; the Patient returned briskly to his Bed, and from that time discharged his Excrements freely, but made little Urine, and that high-coloured: by the use of Emulsions, and the frequent casting in Emollient Clysters and Injections, his Urine voided more easily, and in more quantity. After the separation of the Escars, we dressed the Ulceration with *unguent. tutiæ*, and injected *troch. alb. rhaz.* dissolved with a Mucilage of the greater Cold Seeds, *sem. plantag. papaver. albi, psyllii, in aq. spermat. ranar. & germ. querci.* These Parts disposing to cicatrize, the Patient was seized with a Pleurisie, and not submitting to be let Blood as was prescribed, his pain increased so very much that he could scarce breath; being afterwards let Blood about eight ounces, he was relieved: but then a *Diarrhæa* followed, and it being Mid-winter, and the Patient not allowing himself Fire, nor observing good Diet, it terminated in a Dyfentery, and he languished and died.

TREATISE

OF THE

KING'S-EVIL.

The FOURTH BOOK.

CHAP. I.

Of the Cure of the EVIL by the KING's Touch.

WHAT great Difficulty we meet with in the Cure of the KING's-Evil, the daily experience both of Physicians and Chirurgeons doth shew. I thought it therefore worth my while to spend a whole Treatise upon the Subject, and very particularly to go through the description of it, informing thereby the young Chirurgeon whatever is requisite to the Cure, at least as far as it cometh within the compass of our Art. But when upon trial he shall find the contumaciousness of the Disease, which frequently deluded his best care and industry, he will find reason of acknowledging the goodness of God; who hath dealt so bountifully with this Nation, in giving the Kings of it, at least from *Edward the Confessor* downwards, (if not for a longer time) an extraordinary power in the miraculous Cure thereof. This our Chronicles have all along testified, and the personal experience of many thousands now living can witness for his Majesty that now reigneth, and his Royal Father and Grandfather. His Majesty that now is having exercised that faculty with wonderful success, not only here, but beyond the Seas in *Flanders, Holland and France* it self. The King of this last pretends to a Gift of the same kind, and hath often the good hap to be alone mentioned in Chirurgical Books, as the sole possessor of it, when the *French* themselves are the Authors: yet even they when they are a little free, will not stick to own the Kings of *England* as partakers with him in that faculty; witness the Learned *Tagaultius*, who in his Institutions takes notice of King *Edward's* faculty of doing the same Cure, and the continuance of it in his Successors. *Italy* as well as *France* hath made the like acknowledgments in the Book of *Polydore Virgil*, who reciting the Gift given to Saint *Edward* the Confessor, doth subjoyn these

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words : *Quod quidem Immortale munus quasi hæreditario jure ad posteriores Reges manavit : nam Reges Angliæ etiam nunc tactu, ac quibusdam hymnis, non sine ceremoniis, prius recitatis, strumosos sanant.* " Which Immortal gift hath been " derived as it were by an hereditary right to the latter Kings ; for the Kings " of *England* even now also do Cure the *Struma* by Touch, &c.

Indeed if Historians of our Nation be diligently compared with the *French*, we shall find that the *French* Kings had this Gift later than ours. *Dupleix* a most diligent Writer of that History, deriving it no further than *Philip* the first, and *Lewis* the gross ; saying, that before their times no man had that power : whereas we on the contrary meet with the general acknowledgments of all our Writers of the same miraculous power in *Saint Edward's* time, which were enough for this Controversie : and not only so, but with strong surmises, that this Miracle was ancients ; it being notorious in the days of *Malmshurienfis*, who lived not long after his Reign, that it was then disputed, whether the Cure of the Evil were a peculiar reward of the Kings-Holiness, or rather a Hereditary faculty attending the *English* Crown. Which Gift, that it was not taken away upon our departure from the Church of *Rome*, we have not only our daily experience to testify, but also the confession of Doctor *Harpsfeld*, a great Divine of the *Romish* persuasion ; who, after he hath in the Ecclesiastical History of *England*, described at large the Miracle wrought by the Confessor, doth add, *Quam strumosos sanandi admirabilem dotem in posteros suos Anglorum Reges, ad nostra usque tempora transfudisse & perpetuasse, merito creditur.* " Which admirable faculty of curing the *Struma*, he is justly believed to have " transmitted to his Posterity, the Kings of *England*, and to have continued " it amongst them to those times in which he wrote. And when Bishop *Tooker* would make use of this Argument to prove the Truth of our Church, *Smith* doth not thereupon go about to deny the Matter of fact ; (nay indeed both he and *Cope* acknowledge it) but he rather chuseth first to retort upon him the Protestant Argument against Miracles which they will not allow to be the necessary mark of a true Church, because they may also be performed by Infidels. But withal he himself, who is not willing to let go so specious an Argument from his own Church, finds another Solution of the difficulty, attributing it to the great Goodness of God, and the great Grace of *Saint Edward*, *Quod nec in indigna hærede defecerit*, that the Gift did not fail in an unworthy Successor : Such as he calleth Queen *Elizabeth*, and adds, that she did perform that Cure, *non virtute propria, sed virtute signi crucis* ; not by her own virtue, but by virtue of the Sign of the Cross, which she made at the time of Healing ; as if the Sign of the Cross, by whomsoever made, were sufficient to work a Miracle. What would we now say were he living, and had seen it done by three Generations of Kings without the Sign of the Cross ? But it is not my business to enter into Divinity-Controversies : all that I pretend to, is, first, the attestation of the Miracles ; and secondly, a direction for such as have not opportunity of receiving the benefit of that stupendious Power. The former of these, one would think, should need no other proof than the great concourse of Strumous Persons to *White-hall*, and the success they find in it. I my self have been a frequent Eye-witness of many hundreds of Cures performed by his Majesty's Touch alone, without any assistance of Chirurgery ; and those, many of them, such as had tired out the endeavours of able Chirurgeons before they came thither. It were endless to recite what I my self have seen, and what I have received acknowledgments of by Letter, not only from the several parts of this Nation, but also from *Ireland*, *Scotland*, *Jersey* and *Garnsey*. It is needless also to remember what Miracles of this nature were performed by the very Blood of his late Majesty of Blessed Memory, after whose decollation by the

the inhumane Barbarity of the Regicides, the reliques of that were gathered on Chips, and in Hankerchiefs, by the pious Devotes, who could not but think so great a suffering in so honourable and pious a Cause would be attended by an extraordinary assistance of God, and some more than ordinary Miracle: nor did their Faith deceive them in this point, there being so many hundred that found the benefit of it. If his dead Blood were accompanied with so much of Vertue, what shall we say of his living Image, the Inheritor of his Cause and Kingdom? whom though it hath pleased God to deliver out of those dangers that overwhelmed his Royal Father: yet it was with so long an exercise of afflictions, that though (God be thanked) he be not now like to encrease the Catalogue of Martyrs, yet he may well be added to the number of Confessors. This we are sure, the Miracle is not ceased.

But since matter of Fact it self is, in such difficult cases as these, liable to exception; I shall take notice of the Evasions, that obstinate and incredulous Men have used to avoid so great a notoriety of Experience. But since it cannot be denied that many go away cured, some will impute it only to the Journey they take, and the change of Air; others to the effects of imagination; and others to the wearing of Gold.

The first of these is easily confuted by the hundreds of instances that are to be given of Inhabitants of this City, who certainly could meet with little change of Air, or indeed of exercise, in a Journey to *White-hall*. The second is as readily taken off by the Examples of Infants, who have been frequently healed, though they have not been old enough to imagine any thing of the Majesty, or other secret rays of Divinity, that do attend Kings, or do any other act that way to contribute to the Cure. The third hath more of colour in it, because many that have been touched, have upon loss of their Gold felt returns of their Malady, which upon recovery of that have vanished. But in this case also we have many Evidences of the contrary.

For his Majesty's Royal Father in his great extremity of Poverty had not Gold to bestow, but instead of it gave Silver, and sometimes nothing, yet in all those cases did cure; and those that were cured by his Blood wore no Gold.

Now whereas upon the loss of the Gold some have found damage; I would know, whether any of them were relieved by the wearing any other Gold than what the King gave them. This is certain, that many that lost their Gold continued sound; and whereas others did not, it may rather be imputed to secret Providence, which would give the Persons concerned that obligation of being mindful of their Benefactor.

But since the infidelity of many in this fantastical Age, and the want of opportunity of others, doth deprive them of this easie and short remedy; and, since it is not necessary that a Disease, which is cured by Miracle, should be remediable by no rules of Art; I think it will not be amiss, if I do here give an account of what Nature and Art have supplied towards the relief of Mankind, in one of the most obstinate Diseases that I know: in the doing of which, though I think I shall say as much as those have said that have preceded me in this Employment, (it may be something more) yet I must needs profess that what I write, will do little more than show the weakness of our ability, when compared with his Majesty's, who cureth more in any one year, than all the Chirurgeons of *London* have done in an age. However, that this Attempt may not seem to want precedent, give me leave to tell you, that it is no more than the *French Kings* Chirurgeons have done before me, or than old Mr. *Clow* did in Queen *Elizabeth's* days, and all other general Writers in Chirurgery have done more or less. Withal, as feeble as our Art is, this

Treatise will shew you that it is not altogether ineffectual; and though the difficulty of Cure will sufficiently appear, yet the possibility will also be made out in many remarkable Instances.

CHAP. II.

Of the Definition of the Disease, and its Causes.

THE Latines call this Disease *Struma* and *Scrophula*, we the *Kings-Evil*. *Galen* defines it thus, *Struma caro est sicca quæ ægrè solvitur*: *Paulus* thus, *Strumæ sunt Glandula indurata*: *Ætius*, *Strumæ sunt carnes subcandidæ faciliè augescentes, in membrana contentæ, & in summa glandula indurata, quæ in collo & sub inguinibus oriuntur*. *Strumæ* are a hard and Glandulous flesh, somewhat white, contained in a *cystis*, &c. But none of these Definitions do seem to me sufficiently to express the Disease which we in *England* call the *Kings-Evil*. For I appeal to the Practitioners of this Nation, Physicians and Chirurgeons, desiring them to say, whether there be not many Tumours and Ulcers commonly judged to be the *Evil*, which are contained in no *cystis* at all; neither do they concrete into a Glandule. I instance in the thick upper Lips chopt, divers Tumours by congestion in the musculous parts of the Body, others in the Bones, &c. so that either we must exclude all these from the King's Touch, or alter our Definition: yet I do confess withal that the specifick Difference, whereby this Tumour is distinguished from divers others, is so hard to find out, that it will be difficult to put a new Definition in the room of those which I now reject. I shall endeavour to fix upon a peculiar Acidity in the *serum sanguinis* for my specifick Difference; and shall describe the *Kings-Evil* to be, a Tumour arising from a peculiar Acidity of the serum of the Blood, which whensoever it lights upon Glandule, Muscle or Membrane, it coagulates and hardens; when it mixeth with Marrow always dissolves it, and roteth the Bone.

The Author's Description.

If this acid Humour be simple, the Disease is a simple *Struma*; if joyned with a malignity, or any other Humour, it makes a mixt Tumour, as *Struma maligna*, *Phlegmonodes*, *Scirrholes*, *Oedematodes*, &c.

Now by a Coagulation I mean something distinct from Concretion, which is incident to all other Humours and Tumours, and to the *serum* it self upon many other causes. The whole Blood being fibrous may admit of many concretions and thickenings; but they differ from this Coagulation as much as the boiling of Milk up to a thickness; or their thickning it with Flower, &c. differs from making a curd with Rennet. I shall the rather assume this instance of Milk because of the near kindred between it and Blood, and also for the near resemblance that many Strumous Tumours have with the curd of that. It is very common to see the lesser Glandules of the Neck, which of late have obtained the name of Conglobate, to grow large, and fill with a white curd so exactly like that of Milk that it is hard to distinguish them. When they differ from this, it is from some other mixture in the Blood which makes some other alteration; which may be very various, whether in the nature of the coagulating Ferment, or of the matter coagulated: the former may be an Acidity of

of this or that sort, and sometimes so sharp as to approach near to the acrimony of *aqua fortis*; in which cases the Patient feels violent corrosions and hideous pains, the Tumour it self being apt to degenerate into a *Cancer*, or may have other mixture with it to make it of a Vitriolique or Aluminous nature; all which Acidities though they agree in the common notion of Coagulating, yet they make Coagulations very unlike each other. The difference also may be in the Matter coagulated, the varieties of which being infinite are hard to be recited: only I must take notice, that from this latter cause it is that I was forced to put as well the property of Dissolution as of Coagulation into the description of the Disease; for though the Acidity be the same which cometh into a Bone with that which goeth into the Flesh glandule, &c. yet the Matter it works upon being different, *viz.* Marrow, (whose peculiar nature we do not understand, only find it much different from other Juices of the Body) it doth there dissolve and rot it, and with it the Fibres of the Bone it self. Let no Man wonder at the contrary effects of the same Cause, who observeth the different operations of Fire it self upon wax and clay; where it is visible that the contrariety of Accidents happens from the matter, and not the Efficient. The like instance may be made in Vinegar, which when it is mixed with Milk, &c. it coagulates it into a curd; if put upon an Egg, it not only dissolves the Shell, but also attenuates the White contained in it into a limpid water; which White we notwithstanding observe to be a body much apter to concrete and grow thick than Milk it self. The similitude will hold good of our Strumous Acidity, which when it lights upon the *Serum* of the Bloud coagulates it, and when it enters into Marrow, though that be in a nearer disposition to Hardness than the *Serum*, yet the mixture of this Acidity is so far from promoting that Hardness that it rather dissolves the consistency it already hath.

The immediate Cause of the *Kings-Evil* is delivered already, *viz.* the Acidity of the *Serum*: but the remote Causes, *viz.* the causes of this Acidity (to which the *Strumæ* owe their original) are somewhat hard to be enumerated. The heads to which they be referred are these, Air, Diet, Exercise, natural Complexion, hereditary Affections, &c.

Those who are born of Strumous Parents are usually subject to these Diseases, and derive it from them; so they will from a Nurse so diseased whose Milk they suckt.

Those whose Temper of Bloud is acid and the *Serum* apt to coagulate, are very obnoxious: so are Rickety Children, and indeed in all Children the heat being little for concoction, the *Serum* is apt to coagulate.

Those that live in an Air excessively thin and sharp, or very thick and foggy, are both liable to the same Disease. Diet of salt, sowre and slimy: meats are causes of this Disease, of which more elsewhere.

Want of Exercise is a great cause of the Bloud's growing acid and slimy: external Accidents are often the occasional cause of the *King's-Evil*, but they always suppose a predisposition of the Body to it; in which case we often see a blow, compression, bruise, &c. to produce it. So also by a wrench of the hip, knee, ankle or other joynt, we find crude Tumours to arise which are soon followed by visible Symptoms of the *Kings Evil*, *viz.* either glandulous Tumours in the Neck, &c. or Tumours of the Bones themselves, which arising in the body of them make the *Spina ventosa*; of which elsewhere. I shall give you one remarkable instance of a Cook's Servant in the *Old-Baily*, who sleeping one Summer's Night upon a Form, his Head slipping off, the one side of his Neck pressed upon the end of it; when he wakened his Neck was full of *Strumæ* on both sides, some as big as Walnuts, others less; they were of

of different figures, and distinct from one another. He was presently let blood and purged; all else was done that expert Physicians and Chirurgeons thought fit to relieve him; but the *Strumæ* continued, and after a few Days apostemated and mattered, and became virulent Ulcers: he died tabid within half a year. A streight stay, as some Women and Children wear them, hath too often the same effect: pain in the Breast makes them under the Arms, and in ill Habits of body; a sore Leg hath often caused as much in the Groins.

CHAP. III.

The History of the Disease with the Diagnosticks and Prognosticks.

THE *Kings-Evil* is already described in short, but that will not serve the uses of a young Practitioner unless he may have the History of it more fully delivered, which cannot be well done unless we give an account of the Parts themselves which are concern'd in it. Now the Parts usually affected are either Glandules, Muscles, *Viscera*, Membranes, Tendons or Bones. I do not remember ever to have seen the Nerves or Brain affected immediately with any Humour of this kind: or if they have, the Juices of those Parts are rather dissolved and the Fibres corroded by this Acidity after the likeness of Marrow and Bones, than coagulated into a Tumour; which Corrosion when it happens, the Disease gets another name, and being indeed mortal needs not be insisted upon in this Treatise, it admitting of no other doctrine but that of a Prognostick.

Observat. So a young Lady having overgrown Tonfils, which were judged Strumous, was cured by me by Extirpation, as you may see in the *chap.* of *Tonfils*: but she some years after labouring under great pains of her Head, and being upon the way coming up to *London* for Cure, died suddenly; her Head being opened, her Brain was found corroded, and much wasted with great putrefaction, the inner Table of the Skull carious.

Veins and Arteries. The Veins and Arteries do indeed dilate themselves in all congestions of Matter, whether natural or preternatural; but have not any particular Affection in the *Strumæ* distinct from what they have in other cases.

Glandules. Glandules are a very notorious seat of this Distemper, insomuch that Authors generally have confined it to them as its subject. Here we have a great deal to say, *viz.* that this Part is the most commonly affected when-ever the Patient is Strumous; and if the outward and more visible Glands remain whole, yet generally speaking the inward ones, those especially of the Mesentery are obstructed and swell'd. Of these I have seen divers examples, especially in Children, and have passed my Judgment that they have been Strumous, when the outer Signs could not so far justify my conjecture as to make others of my mind: yet when the Patient hath been dead, the truth hath appeared upon Dissection. In one of this sort *Dr. Walter Needham* hath lately been my Witness. Nay, whenever the outward Glands do appear swell'd, you may safely conclude the Mesentericks to be so too, they being usually the first Part that is attacked by this Malady. Nor is the Mesentery alone, but all

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all the conglobated Glandules partake with it: which word *Sylvius* hath appropriated to the reductive Glands that serve the Lymphæducts. These are frequently liable to this Distemper, their offices being a percolation of the *Serum*; therefore whensoever that is amiss, these must needs suffer. This is outwardly visible in the Neck, on the sides of the *musculus mastoideus* quite down to the Clavicle, whence they pass into the *Thorax* down a-long the Spine, and about the Lungs; which themselves also do frequently abound with Strumous coagulations. *Laurentius* adds the *Bronchocele* as a species of this Disease.

It is as easie to be seen in the Groin, *Axilla*, &c. in both which places they do often appear; but no-where more commonly and frequently than in the Neck, of which every day sheweth examples. Nor are the Conglomerate Glandules free of the like malady, under which name *Sylvius* contains all the excretory ones, which I do reckon to be the Salivals bigger and less, the Tonfils, the *Glandula Lachrymales*, the *Thymus*, the *Pancreas*, the *Mammae*, the Testicles, *Prostates*, &c.

These are sometimes affected together with the Conglobates, sometimes separably. Many Instances may be given thereof, in some we have found all the Conglobate Glandules of the Neck swell'd, and many of them to press hard upon and between the parts of the Salivals; yet they remained found.

The like hath been seen concerning the *Pancreas* and *Thymus*, which have been both surrounded with *Strumæ*, yet themselves remained untouched; but very often the Conglomerates are affected by themselves, of which we have a great Example in the *Ranula*, it being but the Tumour of the *Glandula salivaris inferior*, which in a man lieth immediately under the sides of the Tongue. The *Parotis* also, which is the external Salival, is very often preternaturally affected; and in the *Pancreas* the learned Dr. *Walter Needham* saith, he hath seen a Strumous Tumour suppurated, which held a pint of matter when the other Glands of the Mesentery remained found.

The Breasts are evidently obnoxious to it, as common practice testifies.

In a late private Healing I presented a young Woman with one in the right Breast, and 3 near that lying between the 2 Breasts, as large as Pheasants Eggs.

The Testicles and Prostates may be liable, but I cannot instance in them; and it may be that we do the less acknowledge their being affected with this Disease, because we are apt in all these cases to suspect another distemper.

The over-grown Tonfils are so frequently Strumous, that they need not be insisted on.

The *Glandulae Lachrymales* are often infected, and do according to the variety of their disorders produce several sorts of Tumours about the Eye; the most usual of which is a *Lippitudo*, an affection of the ends of the Lachrymal Vessels, which being derived from them do terminate near the *cilia*; so also the *Hordeoli*, &c. nay it is not rare to see the whole ball of the Eye thrust out by the Tumour of these Glandules.

Ophthalmia it self is often a consequent of the Disease; so is also the *Fistula Lachrymalis*, which often oweth its original to this cause.

Besides all these Glandules which are naturally born with us, there are many more which do arise upon the occasion of this Disease in the several interstices of the Muscles, as I have seen in both the arms of one person now under my Cure near the *musculus biceps*. The like happens to others in the Legs and Feet, also the very Fingers and Toes.

In a Child of six years of age I saw them scattering all over the Body, as in the balls of the Checks, and upon that part of the *Os zygoma* nearest the external

Conglobate.

Groins.
Axilla
Conglomerate
more seldom.

Salivals.

Breasts.

Testicles
and Prostates.

Tonfils.

Ophthalmia, Fistula Lachrymalis.

Adventitious Glands, Face, Legs, Arms, Skin, Muscles, Membranes.

external *canthus* of the Eye, higher than the *parotis* reacheth: but whether that were part of the *parotis* or not, the others were certainly adventitious which appeared upon the Sides, Back, Breast, Belly, Shoulders, Arms, and Thighs, scattering up and down, some superficial in the Skin, others deep.

Viscera.

The *Viscera* are often found with great *Strumæ* growing in them, or from them. Nor are we to wonder at it if *Malpighius's* doctrine be true, who supposeth most of the *Viscera* to be made up of Glandules. In them we frequently find Strumous Swellings as in the Liver, Lungs, Spleen, and sometimes appendants to them. Dr. *Walter Needham* declared in one of his late Lectures of Anatomy at our Hall, that he saw a Strumous Swelling hang at the cone of the Heart that weighed two Ounces.

The Tendons are sometimes involved with a great gumminess and collection of Strumous Matter, especially the Fingers, Hands, Feet, and Toes; yea upon the *musculus mastoideus* it self we find them very distinguishable from glandulous Tumours, and hard to be managed. Elbows, Knees, Ancles, are very remarkable Seats of this *species* of the Disease.

Bones carious from within.

Bones are as frequently affected as any part of the Body, Glandules only excepted: but there the manner of the Tumour differs; for though the Bone swell, and the outward shell thereof appear hard, yet the inward Juices are all putrid and rotten. This sort of Tumour is sometimes called *Spina ventosa*, how properly let others judge; but it is certain that not only the Bones of the Fingers *carpus*, *metacarpus*, *tarsus*, *metatarsus*, and Toes, are liable to this Evil, but also the Skull it self and the Jaw-bones, and all the other Bones of the body; the venomous nature of which will be seen by those who upon opening some of these Tumours have found the Bone when laid bare at the first appearance sound, but when pierced into to be in the Heart wholly rotten.

Bones outwardly carious.

Bones are likewise affected on the outside by any Strumous Tumour that toucheth them, whether Membrane or Tendon, &c. which we often experience in opening of them when they lie near such parts; for when we do, we most commonly find the Bone it self bare, if not carious. There is a mixed case of Membranes and Bones which frequently is found Strumous, I mean the *Oxæna*, which requires your utmost Diligence; the Bones and Cartilages there soon rotting, leave a blemish to the scandal of the Patient.

Differences.

As to the Differences of the *Strumæ*, they are sometimes more mild without Inflammation or Pain, and moderately hard, but by access of heat inflame and suppurate; as well those of a round figure, which is esteemed the best and mildest sort, as those of any other. Some of the mildest and biggest *Strumæ* I have seen perfectly suppurated without change of colour in the Skin, but after some days they again became hard as before. When they suppurate with Inflammation then there is a mixture of Blood with them, and they are call'd *Phlegmonoïdes*; others are indurated and after a while Schirrhous, yet sometime by a putrid heat do ferment, and grow painful and soft in the upper part; which softness hath by some been mistaken for a Suppuration, but at their Opening they only gleet, and at length too frequently shew their malign quality by terminating in one of the *species* of a Cancer, as I have shewed you in the Chapter of Cancers.

Other Differences.

Other Differences may be taken notice of, *viz.* that some are primigenial as when the Disease is original, and secondary when they succeed some other Disease, as particularly a Fever, which often terminates in a congestion of matter. It also sometimes happens after Catarrhs and other Distempers. There are likewise some by sudden Fluxion, others by long Congestion, From the place of their situation Differences may be taken which every man's Eye can shew him.

The

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The *Steatoma*, *Atheroma* & *Meliceris*, as they are the frequent companions of, so they are often not easily distinguishable from, these Tumours. This makes *Barbett*, a late Author, to say, that *Materia melli, sebo, aut pulvi similis, circa articulos, Ganglion, circa colli glandulas, Scrophulam sive Strumam, in brachiis, pedibus, aut capite Tubercula, & si ex Lue Venerea Tophum constituit.* By which it appears that he makes them not to be distinct Species of themselves, but the accidents of other Tumours.

Signs of these Tumours will be more difficultly given, by reason of the various shapes in which they do appear.

When it affects a conglobate Glandule the Tumour is usually round, moderately hard, and moveable without pain. Those of an oval figure which are hard and accompanied with pain without Inflammation, are of an ill quality; and if they grow unequal they threaten a *Cancer*. When a Conglomerate is the seat of it, it usually observes the shape of that Glandule, especially if the whole Gland be diseased: but it is not unfrequent to see those Glandules (which are indeed but compositions of lesser Glandules clustered up together like a bunch of Grapes) particularly affected; so that some of those lesser *Glandulae*, or *Kernels*, shall swell into oval, round or flat, or other Figures, leaving the remainder sound enough; as indeed having no other communication with them, but only by that small *pedunculus* which tieth them to, and dischargeth them by, the common great duct of the Glandule.

In a Muscle the shape is uncertain, and alway distinct from the Muscle: the Tumour harder or softer as it happeneth: but those of a round figure are the best conditioned ones.

The Lip when infected is commonly thick and chopt.

Bones when Strumous do swell, grow hard and big, but if you open them, they are found inwardly rotten, as hath already been hinted.

Those which we present to his Majesty are chiefly such as have this sort of Tumour about the *musculus mastoideus*, or Neck, with whatever other circumstances they are accompanied; nor are we difficult in admitting the thick-chapped upper Lips and Eyes affected with a *Lippitudo*: in other cases we give our Judgment more warily.

In the Prognostick you are to consider, whether the Tumours be many or few, grown together in clusters or more distinct, great or small, deep or shallow, moveable or immoveable, benign or malign, soft or hard: the place of them, whether near great Vessels, Joynts, Nerves, Tendons or Bones, and the Habit of the Body, is to be considered; also the Age of the Patient.

If the Habit of body be tolerable, the Patient young, the *Strumæ* recent and but moderately hard, the Resolution or Suppuration of them is feizable: but if they have been of long continuance, are hard and lie deep amongst the Vessels, the work is difficult; yet the Cure of both is very often furthered by accidental Ferments, which will resolve them to a wonder, and as often suppurate them. In case of the King's Touch the Resolution doth often happen where our endeavours have signified nothing; yea the very *Gummata*, inasmuch that I am cautious of predicting concerning them (though they appear never so bad) till 14 days be over. If the *Struma* be moveable, and free from remarkable Vessels, the extirpation is not difficult; but if the Habit of Body be bad, the *Strumæ* immoveable they are not to be medled with; if that they be moveable, yet lie deep amongst the great Vessels, the extirpation is dangerous: besides, in the best Habits of Body new *Strumæ* are apt to arise while you are extirpating the old ones.

If the *Strumæ* have been long ulcerated, and are become sinuous and virulent, and if they lie near one another, they do often find a communication to one

one another, though to your Eye they may seem distinct: in which case the Lips grow callous and the Ulcers corrosive, yea frequently sordid, and the Cure not to be hoped as long as any one *cystis* remains, or indeed the Vessels that feed them; and if they run under the great Vessels what will you do? but if the Ulcerations be simple the Cure is accordingly easie.

Those that are seized of *Strumæ* in the Neck after 40 years of Age seldom recover, those generally labouring under great obstructions, whence spring Scorbutical affections, Jaundice, fainting, Vomiting, loss of appetite, sometimes Dropsie; other while a Cough, in which case they die tabid.

Caries
within the
Bone.

If Strumous Tumours or *Gumata* arise from *caries* in the Bones of the Fingers or Hands, it will require your care; if in the Foot or Toes, it will be more difficult; if in the *Os calcu*, Joynt of the Ankle, or *Astragalus*, or in the Knee-bones, or *Ischia*, &c. where you cannot lay open, or indeed where you cannot judge of the rottenness, the case is deplorable, the work is long; and the very discharge of matter exhausts the spirits of the Patients, so that they generally die of a *Marasmus*: but if by strength of Body and help of Medicines the Ulcers do digest, sometimes the rotten Bones do moulder and cast forth, and by vertue of a *callus* within, the member is supplied; as in some cases you may see, but the case always protenderh danger.

Caries
from
without.

If Strumous Tumours or *Gumata* do outwardly foul the Bones, if the Habit of Body be tolerably good and the Ulcers well handled, they may recover; but if the Habit of Body be bad, new Ulcers arise, so that the work is long and difficult.

CHAP. IV.

Of the Method of Cure.

IN the Cure of the *Kings-Evil* you must consider the Habit of Body, Strength and Age of the Patient, the affection of the *Viscera*, and particularly whether the *Struma* be simple or complicated.

If all things appear benign according to the Diagnostick or Prognostick before delivered, you may hope well; if otherwise, then you are to defend your self with a prediction, and work wearily.

In order to the Cure three Intentions are required. The First consists in the regiment of Diet and the other non-naturals; the Second, in Pharmacy or internal Prescriptions; The Third, in the application of Externals, either to discuss, suppurate or extirpate the Glands.

In the First, concerning a general regiment of Diet, &c. there ought to be special regard had of the Constitution of the Patient whether he be hot or cold, dry or moist, old or young, tough or tender and washy. If the Body be cold and moist, we generally suppose a *crapula* preceeded, and crudity to abound; in which case the ready road is by Fasting from meat and drink, which was the method of the Ancients, or at least great moderation: their Diet ought to be moderately heating and drying, Mutton, Kid, Rabbet, Pullet, Chicken, Partridge, Pheasant, Cock, &c. and these roasted; avoiding all meats which yield a gross nourishment, as Water-fowl, Fish and Herbage: their

their Bread ought to be of Wheat and well baked, and their Drink medicated Ale or Beer; Wine is also allowed and Water utterly forbidden.

In hot and dry Bodies which are tending to a Hectick, we allow a more humecting Diet, their Meat boiled with Lettuce, Spinage, Purslain, Wood-sorrel, &c. To some of these we dare scarce permit the eating of any Flesh, but rather a Milk-diet or Asses Milk; but where Milk doth not agree we prescribe them medicated Broths.

Air is a great help in our Cure: in the cold ones it ought to be moderately heating and attenuating, in the hot ones cooling; in neither over much piercing, as that of *Hampsted* is, in which sort of Air there is always something esurine and acid; but rather mild and gentle, as that of *Kensington*, upon which supposition of gentleness, the farther removed from the smoke of the City the better. I shall mention one Observation which I leave to your Judgment, whether it ought to be attributed to the smoke or Northern blasts from *High-gate*. It was in a Patient of Dr. *Tho. Cox* and mine, diseased and wasted even to skin and bone: we removed him to *Knights-bridge*, where after in some weeks he had a little recruited his strength, and was eased of his Cough, which had been very grievous to him; we removed him (for more conveniency of curing an Ulcer with *caries* of the *cranium* which he had some time laboured under) to a Lodging near *Kings-Gate* in *Holbourn*, which stood backwards and Airy enough, the windows opening to the Fields. Upon lying there but two nights he relapsed to such a degree, that if I had not removed him the third day I verily believe he could not have survived the fourth; but at *Knights-bridge* he again recovered, and some weeks after went well away to his Parents in the Country, and hath continued healthful since.

Exercise of body ought to be enjoined, it being necessary to waft superfluities; Sleeping in the day is forbidden, unless it be in case of pain to which it is an Anodyne; Passions of the mind ought also to be moderated.

The second Intension consisting in Pharmacy, must be qualified according to the Habit of body. If it be cold and flegmatick, abounding with gross viscous Humours, your Prescriptions ought to be heating and attenuating: in Plethorique Bodies you must purge with the stronger Catharticks, or repeat the milder often, otherwise the Disease will be apt to increase under your hand. The Purgatives are, *species hieræ cum agaric. diaturb. pulv. cornachini, pil. cochiae, è duobus, rudii, hermodact., alæphang. imperial. & succino, trochis, albandal, diagrid. resinæ, jalapii, & merc. dulcis*, and all those Medicaments prescribed in *Lues venerea*. R *pil. rudii* ℥j. *calomel. gr. 15. ol. sassafras gut. iij* Misce & fiant pilulæ 5 auratæ; sumat summo mane. Or, R *senæ* ℥ss. *agarici trochiscati* ℥j. *hermodact.* ℥iv. *sem. carthami* ℥iij. *salis tartari* ℥ss. *ligni sassafras* ℥ij. fiat infus. in aq. flor. genistæ, scrophular. an ℥vj. colaturæ adde syr. de spina cervina 3x. vel q. s. Or, R *turbith gummos. hermodactyl. an.* ℥ij. *rad. scrophulariæ utriusque, an.* ℥j. *rad. angelicæ* ℥iij. *fol. senæ* ℥ss. *diagrid.* ℥ij. fiat pulv. & cum syr. ex infus. ros. pallidar. fiat Electuar. dos. ℥j. ad ℥ij. addendo *calomel. gr. x.* now and then. Or, R *sarsaparill. elect.* ℥ij. *rad. chinæ, cort. lig. vitæ, an.* ℥ss. *sassafras, santali, citri, an.* ℥ij. *rad. jalapij, senæ, an.* ℥iijss. *hermodact. turpeti, an.* ℥iijss. *pulveriz. omnia, & fiat Electuar. cum s. q. mellis despumati.* Or, R *rad. aristoloch. rot. raphani, spatulæ sætidæ, an.* ℥j. *pimpinellæ, rutæ, pilosellæ, an.* ℥ij. *rad. scrophular. filipend. an.* ℥ss. *sem. anisi* ℥ij. *zinziberis* ℥j. *turbith. gummosi, fol. senæ, an.* ℥iij. *sacchar. alb.* ℥iv. fiat pulv. of which the Patient may take daily a spoonful in White-wine. Or he may purge with this Wine, R *summitat. marjoranæ, origani, calaminthæ, tamarisci, an.* Mj. *flor. ros. damasc. salvia, betonic. anthos.*

anthos. stachad. centaur. min. veronic. utriusque, an Mss. sem. papaver. alb. 3iij. sem. fœnic. dul. nigellæ, Romi, cardomomi, cubehar. an 3j. rad. ireos florent. calam. aromat. pyrethri, an. 3ß. cortic. aurantii siccæ. 3iij. cort. lig. sassafras, cort. Winteran. an. 3ij. hermodactyll. turbit gummosi, an 3ij. hellebori nigri 3iij. macerentur in vino Hispan. 3iv. per quatrimum; dos. cochl. iij. mane & horâ somni. R spec. hieræ picræ simpl. 3iß. cort. Winteran. contus. 3ß. maneat spatium trium dierum in frigido in aq. lumbric. 3ß. aq. mirabilis & brioniæ composit. an 3bj. sæpius agitentur, extrahatur Tinctura clara.

R pul. sancti 3ij. sacchar. opt. in aq. mirabili dissoluti 3j. spir. cinamomi, gut. ij. fiat tabella ad pondus 3j. capiat iij. pro dos.

Alteratives are also usefully taken those days they do not Purge, of which sort this is very much commended. *R ciner. spongiæ, pilæ, or paleæ, marinæ, ossis sapiæ, piperis longi nigri, cardomoni, zinziberis, salis gemmæ, pyrethri, nuc. cupressi, gallar. an 3ij. fiat pulvis*: he is to chew some of it daily, and swallow it down as it were insensibly. Or, *R rad. gladioli condit. 3j. ciner. viperar. 3vj. ciner. spong. 3ß. spec. de gemmis 3j. diarrhod. abbatis 3ij. cum syr. de betonica fiat Elect.* de quo capiat ad q. castaneæ tribus horis medicin. any hour in the day fasting. Or, *R rad. belen. gladioli, ireos, an 3j. conf. flor. anthos. betonic. an. 3vj. theriac. Venetæ 3iij. spec. aromat. rosati, diagalangæ, an 3j. cum syr. de cort. citri, fiat opiata*; sumat q. 3iij. horâ somni. After any of these may be drank a draught of the following Decoction; *R sarsaparillæ 3iij. ligni guajaci 3iß. sassafras 3vj. rad. filipendulæ, scrophulariæ maj. an. 3j. fol. agrimonix, herb. Roberti, veronica utriusque, an Mss. flor. betonic. anthos. an P. j. liquiritiæ 3ij. sem. coriand. 3vj. coq. in f. q. aq. font. ad 3vj. colaturæ adde vini rhen. 3ij. sumat 3vj. horis trib. medicinal.* Or, *R rad. chinæ 3ij. sarsaparillæ 3vj. santal. omnium, an. 3iij. sassafras 3x. infund. in aq. font. 3vij. per horas 12, deinde, adjectis fol. agrimon. Mij. fol. veronic. Mij. scabiosæ Mj. sem. fœnic. dul. carui, an. 3iij. uvar. passular. enucleat. 3vi. coq. and consumpt. tertiæ partis; fiat colat. pro potu ordinario.* *R rad. sarsaparillæ 3ß. rad. chinæ 3j. ligni sassafras 3j. rad. scrophular. filipend. an. 3j. ophigolos. alchimillæ, fol. agrimon. veronica utriusque, an. Mj. milleped. n° 200. liquirit. 3ijß. coq. in aq. font. 3x. ad 3vj. sumat ad 3iv. tribus horis medicin.* The Decoction of *lig. vitæ* in flegmatick Bodies alone frequently cures the simple Strumæ. *R sarsaparillæ incis. & contus. 3iij. rad. china 3j. lig. lentis. 3ij. ras. ebor. 3j. millep. recent. n° 1000. uvar. passular. enucleat. 3vij. rad. rusci 3iv. M. fiat sacculus pro congiis tribus cerevisiæ non lupulat. pro potu ordinario.* In some cases *aq. calcis* hath been of good use, thus: *R aq. calcis 3vj. sarsaparillæ incis. & contus. 3ij. chinæ 3j. sassafras 3vj. uvar. passul. enucleat. 3iv. glycyrrhizæ 3j. fiat infus. & coletur pro usu; bibat 3iv. tribus horis medic. in delicate Bodies you may leave out the Sassafras and make Emulsions of it with some of the 4 cold Seeds. Almonds, &c. sweeten it with fine Sugar. Chalybeats are frequently of use in these Diseases, and may be thus prescribed: *R margaritæ pul. 3vj. ocul. cancror. 3j. cerus. antimon. 3ß. salis martis 3iij. sacch. cand. alb. 3iv. fol. Auri n° vj. M. fiat pul.* Or, *R chalybis cum sulphur. præparat. rhab. opt. an 3vj. cort. Winteran. 3ij. sal. absinth. 3j. sacchar. opt. 3iv. fiat pul.* the Dose of either may be a Dram. If the Patient be of a hot and dry Constitution the case is more difficult, because the Medicaments eminent in the Cure of this Disease are generally such as are like to injure the Body in one of those qualities being most of them such as either heat, or at least dry it; many of them do both, viz, Sarsa and the Woods, as also the cineres Spongiæ, sal-Gemmæ, and all the Species. In this case the Waters will have their place (though I cannot so particularly approve them as others do.) Asses Milk is of great efficacy in the most of these, of which I shall give you one Instance in a case where my worthy Friend Sir F. P. was concerned.*

A young

A young Gentlewoman about 11 years of age, shrewdly diseased with *Strumæ* in her Neck, with obstructions in the Mesentery, she being thereby exceedingly emaciated: Sir Fra. Pr. being sent for, and seeing her so diseased with loss of Appetite, advised her to be removed to the fresh Air at *Kensington*; she was so, and there by Asses Milk recovered her strength, and returned to her Friends, well recover'd. Where Asses Milk doth not agree we prescribe Distill'd Milk, of which sort this may serve for an Example. *℞ sarsaparillæ elect. incis. & contus. ℥j. ras. corn. cervi 3vj. fol. agrimon. veronicæ utriusque, an Mijj. santal. alb. rubri, an 3ij. liquiritia Anglic. ℥j. lignac. borten. n° 100. vermium terrest. ℥j. lactis vaccini recent. cong. ii. distillentur in organo commun. S. A. Liquoris distillat. sing. ℥ijj. adde tabellas oculor. cancror. 3ij. sumat ad quantitatem 3iv. singulis dosibus addend. aq. cinam. bordeat. C. ij.* To these Diseased Patients we also generally prescribe Decoctions of *sarsa, china, ligni lentiscini, santal. albi, ras. C. C. & eboris*, with the more temperate Pectorals and opening Roots; so also the testaceous powders of *oculor. cancror. coralli, margaritæ, &c.* of which this may serve for an Instance. *℞ chelar. cancror. cerus. antimonii, ocul. cancror. an 3ijj. margaritæ, corall. rub. an 3ij. sacchar. purissimi 3w. fiat pul. de quo capiat ad 3j. ter in die superbibendo haustum aq. lactis superscriptæ.* Or the foresaid Powders may be made into Pills with *bals. Peruvian. &c. Mer. diaphoret. bezoard. miner. antimon. diaphoret.* are also great Specificks in these Diseases, Emulsions, Pearl Julep, and Opiats are also of use. Purging in this case, if the Body require it, ought to be with Lenitives, viz. *Elect. diacassie cum manna, diacatholic. diaprun. syr. de pomis purgantis diascereos, syr. de rhab. & de cichoreo cum rhabarbaro*: and to Children the infusion of Rhubarb is sufficient. Our most experienc'd Physicians have generally purged these with *pul. rhab.* with an addition of the *Elect. diascord.* or, *succ. chermes*, with *Mer. dulcis*, where they had been subject to a *Diarrhœa*, and in other cases alone, or mixed with the milder Purgatives; for in truth whatsoever Disease it is complicated with, without some preparation Mercury our hopes are vain; nay in some of the most deplorable cases where the Patient hath been extremely emaciated by reason of the Acidity in the *serum*, I have proceeded higher to salivate them, and thereby recovered them, as you may see in some of the Observations of Ulcers with *caries* in the Bones.

The third Intention is performed by the application of Externals, 1. to the Tumours which we endeavour to resolve or suppurate or to extirpate, which latter may be perform'd either by manual Operation or by Escarotick or Caustical Medicaments; 2. to the Ulcers, which are the effect either of Suppuration or Extirpation. In Tumours we shall begin with Emollients and Discutients, though I must confess it is no easie work to resolve these Glands, if we consider two things: first, the stubbornness of the Matter, secondly, its being contain'd within a *cystis*: yet in soft delicate Bodies the milder sort of Glands, which are not too much indurated, do frequently resolve. We shall therefore offer to you such as I have sometimes applied with tolerable good success: as *℞ empl. diachyl. irreat. 3ij. gum galbanum, ammoniac. dissolut. in aceto, an 3℔. pul sem. nasturtii 3j. sal. gemmæ 3ij. sem. sinapis, & urtica pul. an 3ijj. axung. anseris, ol. irini, an 3vj. ceræ 3ij. M. S. A. fiat cerat.* Or, *℞ rad. bryonia, cyclam. raphani, an 3ij. cucumeris silvest. spatula sætidæ, an 3j. coquantur in lixivio communi ad mollitiem: cribraturæ adde sterc. columbini, caprini, an 3j. gum. ammoniaci dissol. in sp. vini 3ij. labdani, styrac. calamitæ, an 3℔ picis naval. q. s. fiat cerat.* Or, *℞ gum. galban. sulph. virvi, an 3j. salis armoniaci 3ij. terebinth. q. s. fiat ceratum.* The softer *Strumæ* may by these or some of Celsus's Malagma be resolved, or disposed to Maturation by the access of Heat and subtil quality of the Medicaments.

Those

Those which partake of a *Pblegmon* do frequently suppurate: the way to further Suppuration is by such-like: *R cepar. capit. allior. in furno coctor. n° ij. mucilag. radic. althææ, lilior. an. 3j. pul. sem. sænugræci, lini, an. 3ss. fermenti veteris 3ij. cari tosti n° iv. limac. n° vj. axung. anseris & porcine, an. 3iss. croci 3j. Mj. fiat. cataplasma. R tussilag. cum toto M. ij. sem. lini pulver. 3vj. axung. porcine q. s. fiat cataplas. S. A. Or, R folior. & rad. althææ, rad. lilior. an. M. j. sem. lini, sænugræci, an. 3j. far. triticeæ. 3iss. axung. porcine & galline, an. 3iss. vitel. ovor. n° ij. croci 3j. fiat cataplasma.* In order to the suppurating of them it is common to pinch them hard: I have seen some people in the Country thrust a thorn into them, and thereby stir up Inflammation which soon disposeth them to suppurate. You must endeavour a perfect Concoction; for if you open them while any part of the Gland is hard, it will increase and put you upon a necessity of eradicating it, or of leaving your Cure imperfect. I could give you many Instances of Patients that have come to me for Cure after such Treatment. As to the way of opening them when suppurated, that by Incision makes the least Scar; but if the *Struma* be large, the way by Caustick may give you more Opening, and with less pain assure the Cure: the Matter being discharged you may deterge with *mundif. Paracels. præcipitat.* and the Vitriol-stone, and afterwards incarn and cicatrize, as in crude Abscesses hath been shewed.

But in the old and hard *Strumæ* we do seldom obtain a compleat Suppuration; sometimes during the application of the most subtil Discutients we raise a heat in the Skin, which affecting the *cystis* and part of the Gland next under it doth cause an imperfect Suppuration: by the continued use of the Discutients it at length frets its way through in small Apertures, in which case if you continue the Applications, they grow bigger and become so many painful Ulcers spreading one into another, the body of the Gland remaining hard without hopes of Suppuration. But if you dress them a day 2 or 3 with a Pledgit of *unguent. basilic.* you may qualifie the Heat and moderate the Ulceration; and so by interchangeably applying the Discutient, or Lenient, you may happily waste the whole Gland, if the Patient be treated the while by proper Internals. In some of these who have come to me out of the Country with *Strumæ* ulcerated about the Chops, I have seen the *Strumæ* thrust forth in a *fungus*; so that with my *Spatula* passing under them, I have thrust them quite out, and healed the Ulcer in few days: in others where they are incapable of being so soon thrown out, I cut off the protuberant part, and consumed the remaining *basis* with Escaroticks.

If the *Struma* be moveable, and free from remarkable Vessels, the speediest way of Cure is by cutting the Skin, and taking them out whole with their *cystis*: those which have stalks and are pendent, or grow small near the *basis*, may be tied and cut off; of this sort we see many. The last I was consulted in was as big as the largest *Catharine Pear* and of that shape, growing on the outside of the Thigh of a Woman: I made a Ligature about the *basis* of it, and in compliance with the Patient left it on, and deferred the cutting of it off till the next day; but when I came I found it rotted off by force of the Ligature and required no Dressing, I cut it in pieces and found it a white Glandulous body. In an Infant newly born there appeared one upon the outside of her little Finger, of the perfect shape and colour of an unripe Cherry, partly red and partly pale, with a stalk proportionably long: I cut it off with a Knife, it bled with a full stream, I stopt it by the application of *pul. Galeni cum albimine ovi*; the third day after I took of Dressings and saw it healed. About ten days after coming thither to make a Fontanel, I saw that Cherry lying in a Box in the window: I cut into the soft part and discharged a bloody

dy serum: the other side which gave the pale colour to it was a Glandulous Flesh.

In those which are so thick in the *basis* that you cannot make Deligation on them, you may pass a proportionable big Needle under the roots of them and cut them off under the Needle.

The common way of taking out all the species of *Strumæ*, *Atheromata*, & *Meliceris*, by Incision, is in cutting the Skin the length of the Tumour: in these latter you must make the Incision more warily, lest you divide the *cystis* and the Matter flow forth. After you have separated them round to the *basis*, it may be sometimes necessary to make a Ligature upon the Vessels before you cut them off. Those which are of a great bulk and have their *basis* proportionably big, as *Steatomata*, generally called *Wens*, are sometimes taken out by making a cross Incision, other-while by an oval, one taking off so much of the Skin as may be judged superfluous; then separate it, proceed calmly in the Work, for in these the Skin commonly adheres so close to the *cystis*, that it will not part from it without the help of your Knife: having separated it, turn it out, and make a Ligature underneath upon the Vessels, and cut it off; then bring the Lips of the Wound together with 2 or 3 stitches, and dress it up as you see cause. Some Empiricks cut them off with much more ado, scarce making a Ligature on them; but this way being always attended with a flux of Blood, others choose rather to pass a Seton-needle with a strong Ligature close under the *basis*, or as near it as may be, and that way make a Ligature strictly about it. Sometimes we make the like Ligature without Incision, and are content to eat off the Tumour by strenghtning it. Thus it falls off without effusion of Blood; but hereby there is hazard in mortifying the sound parts underneath, or of causing such disturbance as prolongeth the Cure: upon which consideration I do propose in great *Steatoma*'s and complicated Tumours, which are inclosed in *cystis*'s, rather to cut into the *cystis*, and with your hands to pull out that preternatural Body, and leave the *cystis* behind. So shall you be secured from a flux of Blood, and for the *cystis*, you need not doubt but by Digestion it will separate and cast off; the Wound will also heal smooth by Agglutination afterward, if you cut off the superfluous Skin, and bring the remaining Lips together, as in such Operations is usual. An Instance of this I shall give you amongst the following Observations.

After the same manner I usually treat all those Tubercles in the Eye-brows and Face, where the *cystis* separates difficultly from the circumjacent parts, or where a great Scar may be unsightly.

Where the *Struma* are large or lie deep near considerable Vessels, there, if Extirpation be safe, the best way will be by caustical Medicines and Escaroticks. It is a Work requiring more time, yet it is sure; and indeed is the only way our Patients generally admit of. The very mention of a Knife frightening them from us.

In preparation to this Work, the Body ought to be frequently purged, and if there be *Plethora* Venæsection may be necessary: also during the Extirpation they ought to be in an Antistrumatal course of Physick with Alteratives, &c. as hath been already prescribed; otherwise new Glands will arise whilst you are eradicating the old ones. Upon which consideration you are to furnish your self with such Escaroticks as may penetrate deep into the Gland, and do their work with least pain; for these Glands have small sprigs of a Nerve branching through them, which maketh them sensible of Pain and subject to Fluxion; therefore it is that we endeavour to eradicate them with Corrosives least painful. But such is our misfortune that all Medicaments fit for this Work are extremely painful, the stronger Causticks are most proper to begin with upon condition that they be kept within their bounds: of these some are made up of Sope-lees boiled to a stone, but this Medicine will spread in spite of all our Defensatives;

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sives; so will all those made with Arsenick, Sublimate, Vitriol, &c. that of *calx. viva* boiled up with *lixivium saponis* spreads the least. The Medicaments proper afterward to eradicate them are either Escaroticks, as the Caustick-stone, Mer. sublimat. Arsenick, *ol. vitrioli*. Auripigment, unslacked Lime, &c. or Catheretick, viz. all the sorts of Vitriol, *viridis æris*, *squamæ æris*, *chalcitis missi foris*, *Cinnabar*. *Alumen*, Mer. præcipitat. and so forth. The compositions of the Escaroticks are *pul. sine pari ex æqual. part. Merc. sublimat. Auripigmenti, Calcis viva*. A milder than this is that of *Johan. Arden*, *Trochis de minio Vigon*, is a powerful Escarotick; it is compounded of *Merc. sublimat. Minium*, and *Leven*. In his Book you may find Prescriptions more escarotick, of which this is one. *R. merc. sublimat. ʒss. arsenici pul. ʒi. cerus. succi amyli an ʒii. succi asphodeli ʒx. aceti opt. ʒv. bulliant omnia ad consumptionem succi & aceti, deinde pulverizentur & incorporent. cum ʒij. panis crudi addend. auripigment. calcinati ʒiv. & cum modica aqua ros. fiant Trochisci*. You may make this stronger by leaving out the Cerus and Starch, and adding a few drops of *ol. Arsenici*; but you will find the mildest of these Preparations with Sublimate too painful to be applied in tender Bodies. The Cathereticks commonly used are *Turbith. minerale, merc. præcipitat.* alone or mixt with *Alum. ust.* or applied with the use of the Vitriol-stone; the mildest is the Præcipitate, it is of a slow operation, but may serve in tender Bodies.

In the eradicating of *Strumæ*, we are sometimes necessitated upon an accidental erosion of an Artery to apply the strongest Escaroticks; but generally we qualify them according to the Habit of Body, Age and Strength of the Patient, and condition of the Glands, as they are hard or soft, have more or less sense, or are seated in or near an Emunctory. In my long Practice in eradicating these Glands, I have experimented all the several Escaroticks; and Cathereticks aforementioned, and know that those Compositions which have Sublimate in them are exceeding painful, scarce to be endured in the strongest Bodies, although you do take them off in 5 or 6 hours after; yet the Salts having once penetrated the Glands, the Pain will continue vehement many hours after, and affect the neighbouring Parts with great Inflammation and Tumour, and so frequently raiseth new Glands: but when you apply these to the softer Sex, or tender Bodies, it affects their Head with grievous pain, benumbing that side and parts about, depriving their very senses. Fainting, and Palpitation of the Heart, are frequent effects of such Escaroticks, and not seldom a Fever; by which may be judged the ill consequence of applying strong Escaroticks of Sublimate indistinctly to all Complexions and Ages.

The Method I usually begin this Work with is by the application of such a Caustick as will least spread, making it proportionably long, reaching from the lowest part of the Gland upward; for in the consuming it, the *Strumæ* will sink downwards: you must defend the sides with Plaisters that it do not spread; for the Lips being once divided they will give way, and accordingly as your Escaroticks penetrate into the body of the Gland, the sides of it will fall in and be eradicated out of the narrowest Opening you can make; and the narrower it is the less Blemish will arise from the *cicatrix*, and the sooner it will be cured. The Escar being made, you may divide it the whole length, and with a Caustick-stone rub into it till it hath penetrated into the body of the Gland, which it will the sooner do if interchangeably you press into the same place with a stick dipt in *ol. vitrioli*. Having thus done, dress it up with *unguent. basilic. cum oleo lini* hot, embrocating the Parts about *cum ol. ros. & aceto*, and apply an Emplaster *à bolo* over all. This way of dressing is not without pain, but it seldom lasts above half an hour. The third day after you may dress it again, and if you find the Escar in the middle dried hard, dress it with Lenients: but

but if it feel soft rub it again interchangeably with the Caustick Stone and *ol. vitrolis*, thrusting them every way into the body of the Glands, taking care that the Lips of the Ulcer be not enlarged thereby: by this way of proceeding a great part of the *Struma* will be eradicated before the first Escar in the Circumference cast off from the Skin. Having thus near eradicated the *Struma*, you may consume the Remainder with *Merc. precipitat.* and keep it open by Dossils of Lint; permitting the Lips of the Ulcer to contract narrower the while, that it may heal with a *cicatrix* like an incised Wound. This I conclude the easiest and speediest way to eradicate the largest *Struma*: but in these complicated *Struma*, and others which will not admit of such proceeding I apply an Escarotick or the strongest Catheretick Powders as I see cause; of which proceeding you may see more particularly in the following Observations. The *Steatoma* being suet yields not to Escaroticks.

All this while I have treated only of the *Kings-Evil*, as it is contain'd in a *cystis*, being the *Struma* of the Ancients; but in my History of the Disease I have enlarged the bounds of it further, so as to take in several Tumours and Ulcers upon Muscles, Tendons, Ligaments and Bones; also *Ophthalmia*, *Ægylops*, *Fistula Lachrymalis*, *Tonsillæ*, &c. which cannot be reduced to this Method here proposed: yet that concerning Muscles, Tendons, and Bones being more universal, and happening in several parts of the Body, especially the Joynts, I shall say somewhat of in this place; the other I shall be forc'd to handle in distinct Chapters, and place them in the latter end of the Treatise.

As to the *Strumæ*, and other preternatural Tumours included in a *cystis*, affecting the Muscles, Tendons, Ligaments and other Parts of the Body; they differ not in the way of Cure from what hath been already delivered, save that they require more caution in the Extirpation of them as they affect the Joynts or sensible Parts.

The Ulcers arising from these are Cured after the same manner that hath been shewed in that Treatise; for whatever some Authors may have pretended of this or that peculiar Remedy, the Cure depends upon the general Method there proposed, to which, if your fancy so lead, you may add Specificks.

The gumminess upon the Muscles and Tendons require emollient and discutient Dressings, as in the Chapter of *Scirrhus* hath been demonstrated.

The Swellings affecting the Joynts in this Disease are of 2 sorts: both of them are made by Congestion, and increase gradually; yet differ in that the one ariseth externally upon the Tendons, and between them and the Skin, or between them and the Bone; the other internally within the Bone it self.

Swellings of the Joynts are of Two Sorts, External and Internal,

That which ariseth externally affecteth the Ligaments and Tendons first, and sometimes relaxeth them to such a degree that the heads of the Joynts frequently separate from one another, and the member emaciates and grows useless. But for the most part the Humour over-moistning the Ligaments and Tendons produceth a weakness and uneasiness in the Joynt, raising a Tumour externally, and in progress the Membranes and Bones are corroded by reason of the acidity of the Humour; yet it is much hastned, if upon a Supposition of a dislocation they consult the Bone-fetters.

In order to the Cure you ought in the beginning of the Fluxion to apply Emplasters of an Astringent and drying faculty, *empl. de minio, è bolo Caesaris*, &c. with moderate Bandage, and place the Member in such a position as may prevent the descent of Humours. If Bloud abound Venæsection may be admitted, but this Humour requireth Purging with *calamel*, &c. and Alteration by

specifick Decoctions, *antimon. diaphoret. bez. minerale, &c.* In the declining of the Fluxion you must strengthen the Joints by Fomentations and emplasters of a discutient and astringent quality, *summitat. hyperici, centaur. absinth. majoranæ, betonic. flor. salviæ, anthos. ros. rub. balaust. nuc. cupressi, bacc. myrtill. juniperi, &c.* in Wine with the addition of Brandy and Emplaster *de sandicis, &c.* But if through want of such a Treatment they grow excessively swelled, and the Humour incapable of being pressed back or discussed, you may shrewdly suspect the Bones corroded: for that Swelling is for the most part raised by an *Hypersarcosis* within, and ought not to be opened without a prediction of a *caries*; for however it may by a seeming Fluctuation be thought to have Matter, yet upon Opening it will only discharge a Gleet, and the *Hypersarcosis* will thrust out in a *fungus*. If in some particular part there do visibly appear Suppuration, and upon Aperture there do discharge an albugineous Matter, you may conclude the Bone under it is rotten, especially if it be hand or foot: and the longer you delay the Opening, the more rotten the Bones will be.

Therefore in such cases make your prediction of the danger, and give vent to the Matter proportionably large (according to the rectitude of the Vessels) to the Bone, and proceed in the Cure as in Ulcers with *caries*, being careful to keep the Member in a right position that the Joint above it do not contract, as it frequently happens in the Elbow, Knees, and Hip. It sometimes happens that those diseased creatures fall into the hands of pretenders to Chirurgery, who by improper Applications raise great Tumours, and unadvisedly open them; and not knowing how to dress them suffer the Aperture to be fill'd up, and over-grown with luxurious Flesh till the Bone rot underneath. It is also as usual in some others of our Profession, when consulted in such cases, (although they know the Bones to lie carious underneath that *Hypersarcosis*) to advise the leaving them to nature, perswading their Patients that it is the work of Time, and that the assistance by Chirurgery will but increase the Malady. But be assured one rotten Bone cannot cast of another, they may well rot in pieces; but until the *Hypersarcosis* be removed, and the Bones laid bare, you can expect nothing but Apostemations one after another, and your Patients at length will die Heckick. Therefore when you shall be called to such deplorable cases consume that *Hypersarcosis* by such Applications as their strength can bear, and make way to the Bone or Bones, and pull out such as are loose, and dispose the other to exfoliate; then by Compress and Bandage press out the Matter, and endeavour to restore the part to its natural smallness; which that you may do, the Ulcer may be well deterged, and the native Heat cherished by discutient and drying Fomentations as above said. The Compresses under the Bandage ought also to be pressed out of a Solution of *sal nitri, &c. in aceto.* By this Method you may happily cure them, if Internals be the while prescribed with regulation of Diet, &c.

Spina ventosa.

The other sort of Abscesses which take their beginning from an Ulcer in the Bone, I have already mentioned in the general Description of the Disease under the name of *Spina ventosa*: it hath been taken notice of by very few Authors, and I my self succeeded happily in the curing those in the lesser Bones, many years before I knew what to call the Disease. And in truth I do not now greatly approve of the Name, but shall acquiesce in it, and represent it to you as I have frequently seen it in my Practice in the *Kings-Evil*, it being a certain species of that Disease, and of no other that ever I saw.

Its Original.

It taketh its beginning from a thin acid serum in the medullary Juice, which corroding the Fibres maketh a solution of continuity there, and at length corrupteth the interior part of the Bone, and at last (if not prevented) corrodes

rodes the Shell, and passeth its subtil Humour through some porosity it had made.

This Disease of the interior part by degrees usually so affecteth the external Shell of the Bone, as to raise it to a preternatural Tumour, which at the same time overstretching the *Periosteum* causeth an uneasiness; and this Pain if it grows so acute as to produce Inflammation, an Abscess consequently followeth.

If the Bone be spongy and soft, it is wonderful to see how quickly the Fibres of it will be mollified by the influence of the *serum* of the Blood, and made apt for a sudden Distension, as if the part were rather muscular than Bone. So in Childrens Fingers I have seen a Bone swelled in a night, and the like Tumour raised in the spongy Bones of elder persons in few days, and without much difficulty to yield again to exsiccant Remedies.

Yet it sometimes happeneth that the interior part of the Bone is totally corrupted without any external Tumefaction or Pains, till the acid Humour maketh its way through the *cortex*, and eroding the *Periosteum*, causeth a Solution of continuity there; which by access of pain swelleth and inflameth the external Parts, and produceth Maturation in few days. Those in the protuberant Bones do also frequently raise Abscesses after the same manner, sometimes whilst the exterior Parts suffer under another Ulcer different from this: But of that hereafter.

Somewhat of their Differences I have shewed you in the preceding Lines, Differences others may be taken from the Quality of the *serum*. In some there is a sudden Tumour raised in a night, in others it swelleth gradually and never corrupteth externally. In others the Humour pierceth through the *cortex*, and raiseth suddenly an Abscess. And these Differences may be said to arise somewhat from the Place or Bone they affect: for accordingly as the interior part of it is softer or harder, or the external *cortex* is solid or porous, so it suffers Solution sooner or later. Those of the *cranium* for the most part pass their way through the interior *lamina*, and affect the *dura mater*, &c. producing great Pains, Convulsions, *Spasmus*, Epilepsies, and they die, before the Disease is discovered. In the great Bones of the Knees, Ancles, Elbows, &c. they pass their Matter slowly, and are more generally diseased with Apostemations, externally arising from the protuberance of them. In the *Os tali* or Heel-bone which is spongy within and full of external pores, they make their way through more suddenly, and so accordingly they do in the Jaws, Fingers and Toes.

The cause of the *Spina ventosa* I have already delivered you in short to be the Acid quality of the *serum sanguinis* in the Bone. The most visible Signs of it are a protuberance of the Bones without discolouring of the Skin, and often without Tumour or Pain.

The Apostemations proceeding from the *Spina ventosa* do most certainly shew them, they rising always between the Membranes and Tendons; and somewhat of Fluctuation may be felt there before the external Skin be considerably inflamed: also if upon Opening it you make search with a Probe, you will find it penetrate deep into the Bone, yet is the *cortex* of it white whereas the other Abscesses do always begin externally, and if the Bone be bare, yet is it only superficially carious or stained by the Matter.

The Cure of the *Spina ventosa* in the lesser Bones, as the *Cranium*, Jaws, Fingers and Toes is feasible; but those in the bigger Bones are for the most part deplorable. Infants and Children are generally the subject of this Disease.

In the Cure of these the same Method is required which hath been above

proposed in those Abscesses and Ulcers with *caries*; as also the same regulation in Diet and other non-naturals.

The Topicks ought in the beginning to be such as are astringent and drying as hath been set down in Abscesses, viz. *emp. è bolo Cæsaris, comitissæ, de minio simp. &c. cum sapone, de sandicis, & de ranis duplicat. mercurio*, with good Bandage.

If afterwards they pass their Matter externally they must be laid open by Incision according to the length of the protuberance. Those of the *Cranium* are not much protuberant for the reasons aforesaid, yet you ought to make inspection, and proceed accordingly by Rugin or Trepan as the Symptoms indicate. Those of the Jaws are visible, and require vent by extraction of the Teeth, after which the *caries* must be consumed by Medicaments of a drying quality, of which the actual Cautery is the most speedy and effectual. Those of the Fingers and Toes are to be laid open by Incision in case of Aposternation the length of the protuberance, and the Bone cut into, and the *caries* dried up. The Ulcers in the greater Bones ought also to be opened, that the Matter may be discharged, and the Bone lay bare in order to Exfoliation, (if it be possible;) but if the interior part be much corrupted, your best way will be to keep that part of the Ulcer dilated which lieth over the Aperture in the Bone by some Dossil dipt in *sp. vini* or the like, and heal the rest of the Ulcer, and prescribe such Internals as may dispose the Body to a better Habit. For these only are the carious Bones which we may leave to time, it being in vain to attempt the Exfoliation of great Bones, where the rottenness, as in a Pear, beginning at the core hath consumed the substance of them. How all these are particularly treated by me, you may see in the following Observations of Ulcers with *caries*.

We shall begin our Observations with the resolving of *Strumæ*, which generally is a work of Time, and in those which suffer under internal Obstructions of the *Viscera* it is not so advantageous to their healths: upon which consideration I for the most part endeavour to waite them by Maturation, and the while prescribe Internals suitable to the Habit of body and complication of the Disease; for if in resolving them the *Viscera* grow more diseased, it will be imputed to that, and if new *Strumæ* arise the Patient will grow weary and be easily perswaded to consult others, who sometime get the credit of the Cure when the foundation was laid to their hands; wherefore I do not readily ingage in this Work till they have tried others, and can willingly submit to my endeavours.

1. Observat.
vat. of
Discussion.

AN Infant about a month old, the only surviving Child of his Parents, being subject to Fermentations of sharp Humours breaking out in the Head, Face and Body, and frequently affecting the internal *Viscera*, being recommended to my care, I made a Fontanel in its Neck, and purged it with *syr. de rhab.* once in 4 or 5 days, and on the intermitting days gave him a few grains of *bez. minerale* in a spoonful of white Bread and Milk: his spoon-meat was made in a Decoction of *sarsa, ras. eboris, &c.* In case of Catarrh or Cough I prescribed him an anodyne Syrup; sometime the acid Humours affected his Bowels with a *Diarrhæa*, (especially in breeding his Teeth:) to remedy which we prescribed *diascord. cum pul. rhab. &c.* Thus each disturbance was leviated, and the Child thrived. In his 2d. year he fell into the small Pox, and was helped through it by Dr. Tho. Cox: after that the *Kings-Evil* appeared in large Glands on the left side of his Neck: I embrocated them *cum ol. ex ped. bovinis*, and removed his Fontanel into his Arm, also purged him with Rhubarb infused in his Drink and prescribed *merc. diaphoret.* his breaking out in his Head was anointed with Bacon-lard, and covered with

with a Cap made of a Bladder. It was easie for me to have cured all the Eruptions in the Skin with Externals, but I thought it safer to cure them by sweetning his Bloud. The last Symptom which appeared was a swelled upper Lip, at sight whereof I purged him again as aforesaid, and discussed the Swelling. This method of purging with *infus. rhab. &c.* he continueth to this day, and hath thereby recovered a strong healthy Habit of Body.

A Youth aged about 13 years, of a strong Habit of body, was commended to me, having a *Struma* of an oval figure on the right side of his Neck; under his Ear he had also an *Ozæna*, with a thick chopt upper Lip. I purged him with the Infusion of *Sena, &c.* prescribed in the method of Cure, and afterward with one of the specifick purging Powders, to which I added *Calomel.* and enjoined him the drinking *decoct. sarsæ, lign. guaiaci, &c.* with a strict drying Diet, and made him a Fontanel in his Arm. I embrocated the Gland *cum ol. ex ped. bovinis & aceto*, and applied *emplastr. diachyl. ireatum* malaxed with *cerat. æsypi.* By this method the *Struma* relaxed, and seemed to be divided into 3 small Glands, which also resolved soon after. The thick chopt Lip was cured by the anointing it with *Merc. præcipitat.* mixed with *unguent. rosat.* After it was cured, I perceived his Nose swelled and hard; I lookt upon his Nostrils, and saw them contracted very small, and stuf with a crusty Matter. I directed some *ol. lilior.* to be snuft up into his Nostrils, and the next day caused them to be syringed with *decoct. hordei, sem. lini & althææ*, and purged him the day following with *extract. Rudii* and *Calomel.* repeating it every other day, and continued the drying Decoction, *antimon. diaphoret. &c.* His Nose being cleansed of its *Mucus*, I syringed it with one of the *Errhina* prescribed in the cure of *Ozæna* in *Lues Venerea*, and thereby healed the Ulcers.

A Child of about 4 years of age was diseased with a *Vitiligo*, thick upper Lip, and a couple of *Strumæ* on the left side of his Neck somewhat large. I purged him with an Infusion of Rhubarb once in 3 or days, and prescribed him 6 grains of *Merc. diaphoret.* sometimes, and othertimes *Bez. mineral.* then removed his Fontanel out of his Neck into his Arm. Thus at length the *Vitiligo* was dried up, and the *Strumæ* totally resolved. His Lip was frequently relaxed upon his purging, but at length it ceased swelling.

A Maid aged about 12 years, who had formerly been extreamly diseased with internal Obstructions of her Mesentery, &c. supposed the *Kings-Evil*, was cured by Sir *Fra. Pruj.* but after 4 years relapsed, and came to me with several *Strumæ* on both sides of her Neck. I directed the embrocating them with *valentia digitalis* Morning and Evening, purging her sometimes with a cathartick Apozeme of *sena, rhubarb. agaric. hermodact. turbith. polypod. &c. cum syrup. de spina cervin.* and in the intermitting days kept her to the drinking of a *decoct. sarsæ. lign. lentisc.* with some of the antistrumatick Plants prescribed in the Method of Cure; with which she took some of the Specificks. There was also prescribed *cerussa antimonij, &c.* The Glands sensibly resolved and she recovered her health.

A Maid aged about 24 years, of a strong Constitution, came out of the Country to me with many *Strumæ* on both sides of her Neck. I purged her *cum pulv. diaturbith. magist.* with the addition of *Calomel.* and prescribed her a *decoct. sarsæ, Chinæ, lign. vitæ, &c.* which being clarified was afterwards decocted with *mel commune*, of which she drank thrice a day with *antimon. diaphoret. &c.* During her taking these Internals, her Neck was for some time embrocated daily with *valentia digitalis*, and a Cerote was applied *ex rad. bryoniae, cyclamin. &c.* After she had some weeks experimented the foresaid method, and found relief thereby, she returned into the Country. About a year after she came up to London in a very good condition, and by my advice was again purged,

purged, and a Solution of crude Mercury dissolved in *aq. regis* was added to the said *Emplastr. ad strumas*: by which, as I have been since informed, those *Strumæ* are near resolved.

6. Obser-
vat. of
Discussion.

A Maid-servant of about 24 years of age, of a Phlegmatick Constitution, came to me with pituitous Swellings in her Legs and Thighs. She had been frequently purged and treated rationally by others: but the Swellings continuing, she came to me. I advised her to proceed on in the foresaid Course of Physick, and directed her to wear laced Stockings and Trowzes: the former whereof she did make use of with much advantage. But some weeks after she returned to me with many *Strumæ* thrust out on both sides of her Neck, very big, and of different figure. I purged her with *pil. cochiae min. calomel. &c.* and prescribed her opening Decoctions, with Chalybeats and Antistrumaticks, according to the method of Cure, also directed the embrocating her Neck with *valentia digitalis, &c.* but had no great hopes to resolve those Glands whilst pituitous Humours so abounded. The Cure being slow, she grew weary, put her self into their hands, and at length died, I suppose Hydropical.

7. Obser-
vat. of
Discussion
and Sup-
puration
mixed.

A Child aged about 7 years, having been sometime diseased with Obstructions in her Mesentery, &c. and a hard *Struma* of an oval figure moveable under her Chin, Dr. Dacre and my self were consulted. We made her a Fontanel in her left Arm, and prescribed one of *Celsus's* *Malgama's*, which we applied on the Gland, and set her down this following Course of Physick: *R. refinæ jalapii gr. 5. calomel. gr. 10. conf. ros. damasc. ʒij. cum syrup. violar. q. s. fiat Bolus sumend. mane crastin. cum regimine. R. lign. sancti, sarsæ, an. ʒij. sassafras ʒj. fol. scrophul. filipend. cum toto, an. M. iij. betonic. salviæ, urtica, malvæ, an. M. ij. rorismarin. majoran. an. M. j. rad. lapathi acuti, rusci, polypod. an. ʒij. rad. galangæ ʒj. nuc. moschat. ʒss. uvar. passular. ʒss. milliped. 500. contund. aliquant. & præparentur pro sacculo suspendendo in cerevisia mediocr. cong. 3. & post debitam infusionem utatur pro potu ordinario. R. antimon. diaphoret. ʒss. sumat in cochl. 1. potus præscript. mane & vesperi.* By the application of the Emplaster part of the Gland resolved, and part discharged it self in a thin Humour, fretting through small Pin-holes in the Skin. After it was thus totally wasted, I cicatrized the Frets with *unguent. tutiæ*; during which she recovered her health. Mr. Bernard was her Apothecary.

8. Obser-
vat. of
the effects
of Merc.
dulg. in
Children.

A Young Gentlewoman about 13 years of age, Sister to her in the preceding Observation, of a Plethorick Body and strong Constitution, was diseased with an *Ophthalmia*, &c. I prescribed an Infusion of Rhubarb in small Ale to take 3 days, then to take *Merc. dulc. gr. 10. satchar. alb. gr. 6.* in a spoonful of White-bread and Milk, and gave her half a dozen Papers of the Powder, designing she should repeat the taking them once in 4 or 5 days. She went into the Country, and observed the Directions. She took *Calomel.* upon a Saturday in *Christmase* week: it purged her 3 or 4 times. She slept well that night, and went to Church the next day modestly dressed. The night following she complained of some indisposition, and was griped, she also vomited and purged often. She continued ill 3 days before I had notice of it. Then Dr. Dacre and my self went to her, and found her in bed, subject to a Vomiting and a *Tenesmus*, with frequent excretion of a *Mucus*. We directed Clysters of Milk *cum vitellis ovor.* we also gave her a morsel of an Electuary of *diascord. cerussa, antimon. conf. ros. rub. confect. alchermes,* as it is prescribed in the Treatise of *Lues Vener.* in such cases. We likewise prescribed her *decoct. rad. scorzonaræ, corn. cerv. ust. with aq. cinnam. hordeat.* She did not complain of any soreness in her Chaps, nor was there any smell of the Mercury in her breath. She rested well that night, and was well in the morning. We returned to London, concluding that her Distemper was the effect of Cold
the

she had taken at Church. Two or three days after I received a Letter, that she was seized again with a Vomiting and Gripping in her Bowels. I carried the Letter to the Physician; who concluded her Distemper to arise from the corrosive quality of the Mercury. I replied, it would not then have ceased upon our Prescriptions: besides, her Chaps must then have been sore, which they were not. I concluded, that the Humors drawn inward by her Purgings, being checked as aforesaid, still affected her Bowels, and required to be purged off. To which purpose I resolved to carry with me 2 quarts of *Barnet-Water* to purge her. I accordingly went early the next Morning, boil'd it with Milk, and dissolved some Manna in the first Draught. She vomited that presently. I gave her more of the same Water, and plied her with it till she had drank it all. She vomited much green Cholera with viscous Phlegm, and her Stools were frequent and bilious. A Clyster were given her of Milk and Yolks of eggs; and that night I laid her to rest with an Anodyne Draught. She slept well, had a good Stool in the Night, and slept again. She eat a boiled Chicken in the Morning, and from that time was no more gripped. I stayed 2 days, and seeing no Relapse, came away. This was all the ill I ever met with in the giving *Merc. dulc.* and upon such ill regulation every Cathartick would have done as much.

A Woman of about 36 years of age, who had formerly been afflicted with a Strumous Ulcer, came to me, with another of an oval figure, very hard, near the Muscle *Mastoides*. I applied a *Malagma* of *Celsus*, with directions to continue it so long as it would stick. In the space of 3 weeks it suppurated it, and fretted a hole, by which the Matter burst forth. I dressed it with *unguent. basilic.* and *empl. diachyl. ireat.* as it is prescribed in the method of Cure. There remaining some hardness after the discharge of Matter, I applied again the *Malagma*, which caused a Suppuration of the remainder: which being permitted to flow forth, I dressed it with Lenients as aforesaid, and thereby cured the Abscess, without enlarging it by Knife or Caustick.

A Child of about 4 years of age, being internally diseased with a Cough, &c. was put into my hands for Cure of a *Struma* on the right side of his Neck, near the bigness of a small Puller's Egg. I purged him with *syr. diascoreos* dissolved in a pectoral Decoction, and prescribed Lohocks, also medicated Ale, *Bezoard. mineral.* &c. Externally I embrocated with *unguent. magist. ad strumas*, and applied *cerat. Agrippin.* by which method the *Struma* resolved, and the Child recovered that Summer in the Country, by repeating the Internals above mentioned. But about a year after he returned to Town diseased with a large *Struma* on the same side of his Neck, and internally obstructed with the said Disease. Antistrumatics were prescribed as formerly in order to the removing those Obstructions; the *Struma* was suppurated, the Matter let out, and the remaining body eradicated, the Ulcer also disposed to cicatrize. During which the Child not taking those Internals designed, the Obstructions increased, and he died before the Ulcer cicatrized.

A Man of about 25 years of age, much emaciated with the *Kings-Evil*, being internally obstructed, was commended into my hands. He had externally on the right side of his Neck a great Cluster of *Strumæ*: some of them were inflamed, and inclinable to suppurate; others lying amongst them, and scattering about, were pale and hard. I applied over the whole Tumour some of the Suppuratives set down in the method of Cure; and having concocted the Matter, where I found it at first inflamed, I applied a Caustick the whole length of the Bunch, taking in such a breadth as might serve for the eradicating of the rest. Then dividing the Escar, I gave vent to the Matter, and dressed it up with Lenients,

nients. During the digestion of it, I Purg'd him with an Infusion of Sena, Rhubarb, &c. and put him into a *decoct. sarsæ, ling. lentisc. santal. &c.* with *milliped.* and some of the antistrumatick Plants, and prescribed him *Calomel.* with some of the milder Purgatives to be taken once in 4 or 5 days. After separation of the ^{it} Scar, I saw the Ulcer lying unequal, and by search of my Probe found *Sinus's* running under one another, some of them deep under the Muscles. These seem'd to be made by the unequal Suppuration of the Glands. Some of the deepest *Sinus's* I dress'd with Dossils spread with *unguent. basilic.* and Præcipitate, others I dipt in Præcipitate, some I rubbed with the Caustick-stone, others with the Vitriol-stone; then covered all the Ulcer with Præcipitate, and applied *empl. è bolo* over all. After I had thus eradicated those *Strumæ* most conspicuous, I divided some of the uppermost *Sinus's* with a pair of Probe-scissors, and kept the Lips dilated with Dossils dipt in Præcipitate, till I had wasted those Lips: then I made way to the *Sinus's*, and laid them all open, with Escaroticks smoothing the Ulcer; and raising a basis of good Flesh, I cicatrized the Ulcer even. After I had Cured him, I continued the prosecuting of the foresaid Course of Physick with some of the milder Specificks, and directed him to drink Asses Milk; which he did, and thereby recovered his strength, and appetite to stronger nourishment. About two Months after, this person came to me, complaining of that side of his Neck. Dr. Walter Needham being present, we both look'd upon the place where the *Strumæ* had been lodg'd, and saw that part of the Clavicle down to the head of the *Os humeri* much leaner than the other side. I made him a Fontanel in that lame Arm, and advised the embrocating the extenuated Parts with *axung. humana cum guttis aliquot. ol. lavendulæ*: by the use whereof it plump'd, and he enjoyeth good health to this day.

1. Obser-
vat. of
Incision of
a *Meliceris.*

A Man of about 45 years of Age came to me with a round Tubercle (without Inflammation) between the Sagittal and Coronal Suture. I open'd it by Incision, and discharged first a yellow *Serum*, then a gritty Matter like Honey, I wiped away the Bloud, and pressed out the Matter; then dress'd it with Dossils spread with *unguent. basilic.* dipt in Præcipitate, and thereby digested out the *cystis*; and cured it soon after by the common method.

2. Obser-
vat. of
Incision.

A Man of about 30 years of Age came to me with an *Atheroma* on one side the left Temporal Muscle. I open'd it by Incision, and digested it with *mundif. Paracelsi.* He had also one near the Coronal Suture, which had been formerly open'd by Puncture, and remained sinuous and full of loose Flesh. I laid it open by a snip of a pair of Scissors, and deterged, incarnated and cicatrized them both according to the usual method of curing such Ulcers.

3. Obser-
vat. of
Incision.

A Gentleman came to me one evening with a *Steatoma* a little above the Coronal Suture. I slit the Skin with a Lancet, and thrust it out with its *Cystis*, then applied a Pledgit of *unguent. basilic.* over which he put his Peruke on without farther concern, and cured it himself in few days.

4. Obser-
vat. of
Incision.

A Woman of about 40 years of Age had 5 of these scattering about her Head, all which I cut out: some of them were small, others large. They digested with *unguent. basilic.* and were soon cured. Sometimes they lie so superficially, that the scratch of a Comb hath made way for their discharge.

5. Obser-
vat. of
Incision.

A Child of about 3 years of age was brought out of the Country to me with a *Struma* on the left Eye-brow, of an oval figure. I made Incision upon it according to its length, and separating it from its Ligaments, thrust it out, then put a small Dossil in its place dipt in a Digestive, with a Pledgit of the same, *cum emplastr. è bolo*, and Bandage over it. The fourth day after I dress'd it again, deterged it with *unguent. basilic.* and Præcipitate upon a less Dossil, and dress'd

dressed it up as aforesaid. The Second day after I left off the use of Dossils, and, bringing the Lips together, dressed them up with the common Sarcotick, thereby uniting them in a few days, and returning the Patient cured with a seemly *Cicatrix*.

A Maid aged 18 years, had a *Struma* on the left Brow of the bigness of a Pear-plum. I made Incision into the Skin according to the length of the Brow, and separating it, took it out. I dressed it with a Dossil dipt in *albumine ovi* & *pulv. Galeni*, and with *Emp. è bolo* and Bandage bound it up. The next day the Eyelid being very much swell'd, I embrocated the Parts about *cum ol. ros. & aceto*, then let her blood, prescribed a Clyster, at night, and an anodyne Draught. The day after, finding the Inflammation and Swelling great, and the Wound sanious, I fomented them with *decoct. flor. melilot. cham. ros. rub. balaust &c. in vino rubr.* and dressed the Wound with a Digestive *ex terebinth. cum vitell. ovi*: by which method the Wound digested, and was afterwards deterged with *mundif. Paracelsi*, and incarned. I afterwards cicatrized it with *aq. calcis*, &c.

6. Observat. of Incision.

A Youth of about 12 years of age had a *Struma* lying under his right Jaw, of an oval figure. I made Incision into the Skin according to its length, then separating it, fastened a Ligature under it, and cut it out, leaving the Ligature to digest off. I dressed it with Digestive *ex terebinth. cum empl. è bolo*. After Digestion I deterged, incarned and healed it, as hath been shewed in the former Observations.

7. Observat. of Incision.

A Young Man aged 24 years was brought to me, who had a large *Struma* on the *Os frontis*, of an oval figure, between his Eye brows, I divided the Skin, made separation of the Gland, and thrust it out; then cut it off, and dressed the Wound with Pledgits and Dossils spread with *unguent. basilic.* dipt in *pulv. Galeni*, and with Compress and Bandage bound it up. The third day I dressed it again with warm Digestives, and afterwards deterged with the addition of *Præcipitate*. By lessening the Dossils it contracted, and I incarned and cicatrized the Lips close, according as is usual in such Wounds.

8. Observat. of Incision.

A Child of about six years of age had a long white Swelling reaching down from the *Os frontis* between his Eye-brows to the Ridge of his Nose, swelling both sides of his Nose to both the Angles of his Eyes. After various endeavours by internal and external Remedies, he was commended into my hands by Sir *Fra. Prujean* and Dr. *Wolf*. I designed the opening it by Incision according to the length of the Tumour: to which purpose I marked it with Ink, and cut into the Tumour as low as might serve to discharge the Matter, with regard to the beauty of the Nose, where the least Scar is a blemish. There discharged a Matter not unlike the White of an egg, upon which the Tumour sunk. I dressed the Wound with a Digestive *ex terebinth. cum vitell. ovi* upon a Dossil with a Pledgit and an Emplaster over it; applying upon the sides and lower parts of the Nose Compresses of Lint dipt in *Oxybate*, to press out the Matter, and retain them close, that they might unite the sooner. By this Method the Abscess was digested, and afterwards cured in 10 or 12 days by the common Method.

9. Observat. of Incision.

A Woman of about 28 years of age had a large *Struma* on the left side of her Neck, of an oval figure and moveable, under the Skin. I made an Incision on the full length of it, and separating it from the Skin on the sides, pull'd it out, tied a Ligature on the Vessels under it, and cut it off, then dressed it up with a Dossil spread with a Digestive *ex terebinth.* dipt in *pulv. Galeni*, with Pledgits of the same Digestive over it, and a restrictive Plaister over all, with a retentive Bandage. After Digestion I incarned, and cicatrized the Lips together, according to the foresaid method.

10. Observat. of Incision.

A Gentleman aged about 63 years, having been some years diseased with a

11. Observat. of

Sarcoma on his lower Lip, consulted me with Dr. *Fielding*, an eminent Physician of the City of *Gloucester*. It had formerly been attempted by *Escaroticks* and by *Exsiccants*: but it returned, and thrust forth *Excrecences*, one whereof was not unlike a *Strawberry*. They were accompanied with *Tumour* and *hardness*, and would not cicatrize by any Application, but grew up, and spread under a crusty *Scab*, which frequently fell off of it self. We resolved upon the *Extirpation* of it. To which purpose the Dr. prepared his Body by *Purging*, &c. Then in order to the work, the Patient being placed in a Chair to the light, I marked out so much as I designed to cut off; then took hold of the Lip between my Thumb and Fore-finger, and pressing the *Sarcoma* outward, I cut it off with a pair of *Scissors*: upon which I saw the remaining roots start up in a ridge of loose *Flesh*. I pressed them upward, and snipt them off. Then, after I had permitted the *Arteries* to empty themselves a while, I stoppt them by the Application of *Dossils* pressed out of *tinctura vitriol. dulc.* and with *pulv. Galeni cum album. ovi* dressed the Wound up. From that time it bled no more. The third day I took off Dressings, and saw the Wound well disposed to digest. I dressed it with *Digestives ex terebinth.* &c. and from that time deterged it with *Merc. præcipitat.* and the *Vitriol-stone*, cicatrizing it with *unguent. tutiæ* and the *Alume-stone*, and so it continues to this day.

12. Observat. of Nox. me. sanguis cured by Incision.

A Woman about 30 years of age had a small Gland of the bigness of a *Lupine* upon her left Cheek a little above the lower Jaw. It had been a long time growing, and of late years was exceedingly painful, periodically pricking and shooting with *Inflammation* in that Cheek, and would endure no Application. Upon which account she came to *London*, where she consulted several of our Profession together. They all thought it necessary to be eradicated, but differed in the manner, most of them concluding the actual *Cautery* properest. I was afterwards consulted with Dr. *Tho. Cox*, and proposed the *extirpating* it by *Incision*, and a week after visited her again; when, in the presence of Dr. *Cox*, I passed a *Needle* under the Gland, and cut it off. I dressed it with a *Digestive ex terebinth.* &c. deterged with *unguent. basilic.* and *Merc. præcipitat.* and afterwards cicatrized it with *unguent. tutiæ*, and dismissed her cured.

13. Observat. of Incision.

A Youth about 12 years of age had a *Struma* of an oval figure on his right Cheek, lying moveable between his Jaws, and most capable of being taken out on the Inside within his Mouth. I made an *Incision* upon it there, and with my Fingers pull'd it out, then wash't his Mouth with *Oxycrate*: but it continuing to bleed, I fill'd the Wound with *Dossils* of *Lint*, and placed a round *Boulster* dipt in the foresaid *Oxycrate* between his Teeth and Cheek: I also applied externally a *Compress* spread with a *Defensative* with *Bandage*; by which the *Bleeding* was restrained. I took out the *Boulster* in the morning from between his Cheek and Teeth, and permitted him to wash his Mouth with a *Tincture* of *Roses* with *syrup. diamoron.* and the second day after took the *Dossils* out of the Wound: but suspecting that the way of dressing it with them might prolong the Cure, I clipt off the lower Lip with a pair of *Scissors*, and prescribed him a sanative Lotion of *fol. plantag. virg. aur. alchimilla, pilosellæ, rad. consolid. & liquiritiæ cum syr. de ros. siccis*; by the use of which it cured in a few days.

14. Observat. of Incision.

A Man of about 30 years of age had an *Atheroma* on his left Cheek, which at length made its way externally through a small *Orifice*, and healed up again. It growing vexatious to him by its frequent eruptions, he put himself into my hands at a time when it was full of *Matter*. I, feeling the *Tumour* big within between his Jaws, made a large *Incision* into it, and discharged a foul *Matter* with dregs, which shewed it a *Meliceris*. I put my finger into it, and with a *Knife* in my other hand cut off the nearest Lip as far

far as it was hollow, and prescribed him a *decoct. summitat. equiseti, veronica, bistorta, rad. iridis, consolidæ, &c.* to wash his Mouth: by which he was cured, and from that time relapsed not.

A poor fellow of about 40 years of age came to me with a large white Tumour upon the right Cheek reaching close to the tip of his Ear, supposing it was the *Kings-Evil*. I put my Finger into his Mouth, and feeling it big within, and the Matter fluctuating, I thought it Atheromatous; yet for more security opened it by Puncture. It discharged a bloody *Serum*. I permitted it to empty it self, (it being towards Evening) and contented my self in stopping it up with a Tent of Lint dipt in *albumine ovi*, applying a restrictive Emplaster and Bandage on the external parts. The next Morning, finding the external Tumour sunk, I took out the Tent from within, enlarged the Opening, and thrust out a foul Matter like dregs of Beer. I cured it in few days, after the same Method that hath been shewed in the former Observation.

15. Observation of Incision.

A Tradesman aged about 30 years, came to Dr. *Walter Needham* and my self (while we were dressing a Patient in the City) with a large soft Tumour within his right Cheek near his Mouth, much distorting it, so that it hindered him in eating his Victuals: it was overspread with a *Varix*: which ill aspect, I supposed had deterred the Chirurgeons whom he had consulted from meddling with it. But we concluding it a Species of an *Atheroma*, I opened it by Incision by the side of that *Varix*, and discharged a proportionable quantity of *Serum*, and crusted out a Cheesie Substance. Then considering that the over-stretched Lips of the Abscess would by falling between his Teeth be very troublesome, I cut them away, laying the Abscess open: after which I gave him Water and Vinegar mingled together, to wash his Mouth, and prescribed him *decoct. veronicae utriusque, salvia, betonica, flor. ros. rub.* with a Solution of *mel. ros.* to gargle it: and by the touching it sometimes with a Vitriol and Alum-stone, it was deterged and cicatrized in few days; his Cheek also contracted, and became natural as the other.

16. Observation of Incision.

A Man of about 24 years of age came to me with a very large soft Tumour under his upper Lip near his Nose, with very great deformity. He had tried the endeavours of the Physicians and Chirurgeons in the Country by internal and external Remedies, and earnestly desired my Help. I, concluding it Atheromatous, proposed the opening it: which he submitting unto, I passed a Knife deep into it, and gave vent to at least a Blood-Porringer full of serous Humour. Upon consideration of the quantity, I made a search with a Probe, and felt a large Opening into the Cavity of the *Maxilla superior*; but supposed Nature would dispose it to heal, if the Orifice were a while kept open. To which purpose I immediately enlarged the Orifice by Incision the whole length of the Abscess, and gave him of the Decoction prescribed in the former Observation to wash his Mouth. He stay'd 3 or 4 days in Town, and shewed himself to me. The Abscess being well disposed to cure, I permitted him to retire to his house in the Country, and prosecute that Method. Whilst he was there, the Orifice closed, and the Part grew painful and swelled again, upon which he returned to me. I opened it, and discharged a well concocted Matter, keeping it dilated with a Tent dipt in *syr. de ros. seccis*. By this way of dressing the Agglutination of the Ulcer was prohibited, and the Abscess was drained. He returned back into the Country, and I suppose was thereby cured; for I heard no more of him.

17. Observation of Incision.

In the time of the last great Sickness, whilst I was in the Country, a young Woman was brought to me who had a large unequal Tumour near her Neck moveable, and without Inflammation. I designed to take it out by Incision,

18. Observation of a complicated Tumour taken out by Incision.

prepared Dressings ready, and had 2 Women, and a Boy that I had taken to attend me that Journey present to assist me. During the separation of the Skin from the Wound, it bleeding, my two Women left me, and the Boy dropt down in a Swoon: the Patient also growing froward, and the work of Separation being not very easie, I was put upon a necessity of cutting into the *Cystis* the whole length: in the doing of which there discharged about half a large Porrenger full of *materia polenta*: after which, putting in my hand, I pulled out a hard body of Suet. It was a *Steatoma*, and weighed 9 Ounces and a half. Then I fill'd the *Cystis* with Stupes of Tow dipt in a mixture of *unguent. basilicon* and *ol. terebinth.* hot; and bringing the Lips of the Wound over it, applied an *emplastr. è bolo*, with convenient Bandage, to retain the Dressings, there being no Appearance of its Bleeding. The fifth day after I returned thither again, and dressed it as before, the Wound digesting well. The fourth day after, dressing it again, and seeing the *Cystis* lie loose, I pull'd it away with the Dressings; and perceiving the Wound within fresh, I brought the Lips flat over it, and healed it in few days by Agglutination. I did not design the leaving this *Cystis* behind when I began the Operation; but am satisfied that it is the easiest and most safe way in great complicated Tumours, where there is danger of a flux of Blood, and much to be preferred before the Mountebank-way of Abcision with Ligature in every respect.

19. Observat. of a preternatural Tumour taken out of the left Breast by Incision.

A Person of above 60 years of age, of a corpulent full Body, had a round movable Tumour on his left Breast of the bigness of a Chestnut. I divided the Skin by Incision, and finding that Tubercle lying in its *Cystis*, I easily thrust it out by passing a *Spatula* under it; then dressed up the Wound with a round Dossil spread with the common Digestive *ex terebinth. cum vitell. ovi*, with *empl. è bolo* over it. The third day I dressed it again, lessening the Dossil. Thus the Wound digested, the Lips contracted and incarned, and healed in few days. In this *Cystis* was contained a Trash not unlike Hair or Wooll. This Person was subject to these preternatural Tumours. He had one caused by the Waist-band of his Breeches, which I afterwards cut out: it contained the same kind of Trash.

20. Observat. of a complicated Tumour in Inguine taken out by Incision.

Whilst I was attending a Person of Honour in the Country, I was desired by an Apothecary in the Neighbourhood to look upon an elderly Woman, who had a very large unequal soft Tumour in her right Groin. I concluded it complicated, and at their desire opened it, and discharged about the quantity of a Pint of a brown trashy Humour: whereupon the greatest part of the Tumour was voided; but what remained of it lay as it had been a coverture to a cluster of Damascens. I enlarged the Orifice, and found these so many Bladders containing several sorts of Trash in them, some whereof was melicerous. I pull'd them out, and tare the thick Membrane which had divided the Abscess into several partitions; then dressed it with Stupes of fine Tow spread with *mundif. Paracelsi*, which I dipt in *Præcipitate*, and bound it up. The fourth day I dressed it again; and, seeing it digested, I dressed it with some of the same Mundificative dipt in *mel. rosar.* and embrocated the Parts about *cum ol. ros.* By this Method the Abscess deterged, and the Tumour lessened: by which time having done my business in that Noble Family, I left the Cure of the Woman to the Apothecary, who finished it.

21. Observat. of a Struma eradicated by Caustick.

A Maid aged 24 years came to London diseased with a large *Struma*, of an oval Figure, lying on the left side of her Neck deep amongst the Muscles and Tendons. After Evacuation by Purging, designing the eradicating it by Caustick, I marked out the Place with Ink, drawing 2 lines down the length of it, about a finger's breadth from one another: then defending the out-sides with

Snips

Snips of Plaisters, I applied Pledgits spread with my Caustick Unguent in the void space, with *emplastr. diachalciteos*, Compress and Bandage. The next day I divided the Escar, and rubb'd into it with a Caustick-stone and Stick dipt in *ol. vitrioli* interchangeably, till I had penetrated deep into the body of the *Struma*. Then I cut through that Escar, and dressed it up with *unguent. basilic.* malaxed *cum ol. terebinth.* embrocating the Parts about *cum oleo ros. & aceto.* I then dressed it up with *empl. è bolo.* The third day I took off Dressings, and fomented it with *decoct. fol. althææ, malvæ, summitat. abrotoni, flor. sambuci, sem. lini, &c.* and dressed it with Lenients as before, to hasten the separation of the Escar. After I saw the Escar digest, and somewhat separated in the bottom, I rubb'd into the *Struma* again with the Causticks penetrating deeper into each part of it, and dressed it up with Lenients, and so dismissed her. About an hour after the Escaroticks penetrating some Artery in the Gland, it bled through the Dressings very much, and continuing so to do, she was brought back to my house in a Coach: at which time I was in the next Street with Dr. *Walter Needham*, experimenting the Royal Stiptick-Water. We hastned to this Patient, and seeing her bleed, we took off the Dressings, and applying Dossils dipt in the Stiptick, immediately stopt it. I dressed the Escar with Lenients, and a Restrictive over it. The fourth day after I took off Dressings, and applied Lenients again. After the separation of the Escar, seeing the body of the *Struma* consumed, the sides only remaining, I fill'd it with *Præcipitate*, and kept the Orifice dilated till they were totally wasted; then permitted the Ulcer to incarn, and afterwards brought the Lips of the Ulcer close together, and cicatrized them with *unguent. desiccativ. rub. &c.*

A Gentleman aged 30 years, of a tolerable good Habit of Body, had been long diseased with a hard *Struma*, of an oval figure, seated under the lower Jaw on the right side. After he had vainly endeavoured by various Applications to resolve it, he put himself into the hands of Sir *Alex. Fraſ.* and my self. We proposed to eradicate it by Escaroticks: to which purpose his Body being prepared by Purgings, we began our Chirurgery with the Application of a Caustick the length of the *Struma*, and the next day divided the Escar, fomenting the Tumour with a Decoction of *absinth. flor. cham. ros. rub. balauft. &c.* then fill'd up the divided Escar with *pulv. sine pari* of Sir *Alex. Fraſ.*'s Prescription, applying Pledgits of *unguent. basilic. cum. ol. ros.* over it. The second day after I fomented and dressed it up again with Lenients, and continued that Method till the Escar made by the Escarotick began to separate: then I thrust it off, and fill'd it again with *pulv. sine pari.* By this way of dressing, sometimes with Escaroticks, and other times with Digestives, we consumed the main body of the *Struma*, and afterwards digested our the *Cystis* with *Merc. præcipitat.* then permitted it to incarn by lessening the number of the Dossils, and at last cicatrized it with a small Seam by the help of the Vitriol-stone and common Epuloticks.

A Man aged 20 years, of a Phegmatick Constitution, came to me with a large *Struma*, of an oval figure, lying under the lower right Jaw. There were also some little ones lying higher up nearer that Ear. The bigger of these had not appeared worth taking notice of till within six weeks of the time that he came to me. I began with the Application of *valentia digitalis*, and purged him frequently with *pulv. diaturbith, pil. cochix min. calomel. &c.* The Tumour increasing, I applied more powerful Resolvents, as *emplastr. diachyl. ireatum cum gummi, &c.* by which, after some time, it tended to maturation; and then I proceeded that way, purposing not to open it till the whole *Struma* should be suppurated. But he, impatient of the Delay, shewed it to some other,

2. Obser-
vat. of
the like.

3. Obser-
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other, who opened it whilst the Suppuration was superficial; so that presently after the discharge of the Matter it hardened again, and grew difficult of Cure. The Patient returning to my hands, I took off the Dressings, and seeing the Tumour large and hard, the Orifice small, and a Tent in it, I pull'd it out, and filling the Orifice with Lint, applied a large Caustick according to the length of the Gland. The next day I divided the Escar, and fill'd the incised part with *turbit. mineral.* and applying Pledgits of *basilicon* over the Escar, dressed it up with *empl. è bolo.* After the separation of the Sloughs, I dressed it every other day with *Merc. præcipitat. Vigon.* repeated Purgatives and prescribed him *decoct. sarsæ, & lign. guaiaci,* with Antisthumatick Plants, for to drink thrice a day, also *cerussa antimonii,* and some of the testaceous Powders, to be taken as often. During the Application of Præcipitate and the milder Escaroticks, I made but small progress: wherefore to hasten the extirpation of it, I applied a *troch. de minio* the whole length, with Dossils spread with Lenients over it. At the next day's dressing I found the *troch. de minio* had made a great penetration into the Gland, but with excessive pain, inflammation and tumefaction of the Parts. I fomented it with Milk, dressed the Escar with Lenients, and applied an anodyne Cataplasm *ex fol. malvæ, bismalvæ, panis triticeï,* &c. by which the Tumour relaxed, but those *Strumæ* near the Ear appeared bigger; which foreshewed the danger of proceeding farther with Escaroticks of Sublimate. I embrocated them with *valentia scrophulariæ,* and hastened the discussing and drying up of the inflowed Humour by a Fomentation of *summitat. absinth. majoran. flor. ros. rub. balaust. &c.* During the separation of the Escar there appeared daily an increase of a well-digested Matter, and after the Escar cast off, the Matter issued out above and below under the Gland. The way to remove these *Sinus's* was to extirpate the *Struma*; which I presently did, by rubbing it with the Caustick-stone and Oil of Vitriol interchangeably. After I had removed it, and wiped off the loose Sloughs, I dressed the Escar with a mixture of *unguent. basilic. & ol. lilior.* hot, and kept the Lips of the Ulcer dilated with Dossils, then embrocated the Parts about, applying over all *empl. è bolo.* After the separation of this last Escar, there appeared part of the *Struma* lying on one side, which I afterwards wasted by the application of Præcipitate and the Vitriol-stone, then lessened the number of my Dossils, and permitted the Ulcer to heal up; during which I repeated Purging, and advised Embrocation of the lesser Glands. He was hastened into the Country: but of late years I have seen him very well, and those lesser *Strumæ* wasted.

4. Observat. of the like.

A young Gentlewoman, Scrophulous and full of fancy, came out of the Country with a large *Struma* on the right side of her Neck, lying under that *Maxilla*, not unlike that in the former Observation. It had been attempted in the Country superficially, and healed up again, with the Skin adhering to it. She had consulted several of my Profession in the City, and was curious in the informing her self how I would proceed in the taking it out. I offered to her the several ways proposed in the method of Cure, but more particularly the way by Incision. She objected against that way, having (it seems) been told that it might prejudice that Eye. I, supposing she urged it out of fear of having it cut, did not farther insist upon it: for indeed the very proposal of cutting generally frights people from us. Some time after she took a Lodging near me. I began the work by the application of a Caustick the full length of the *Struma*, divided the Escar, and fill'd it up with *Merc. præcipitat. Vigon.* then embrocating the Parts about *cum ol. ros. & aceto,* I dressed the Escar with *unguent. basilic.* and applied *empl. è. bolo* over all, repeating this way of dressing every third day, and fomenting it with *decoct. absinth. flor.*

flor. ros. rub. balauft. bacchar. myrtil. nuc. cupress After the Escar separated in the middle, I thrust in a *troch. de minio*, and dressed it up as aforesaid. The next day she complained of her ill night's rest, and shewed me the Tumour and Parts about inflamed and swelled. I fomented them with Milk, dressed them up with Lenients, and let her blood in the Arm. The next day I purged her with an *infus. senæ, rhab. &c.* and afterwards with a cathartick Apozeme; Which Method ought to have preceded, if she would have admitted it. As the Sloughs cast off, I strewed in *Præcipitate*, and touched it sometimes with a Vitriol-stone. Having thus penetrated under part of the *Struma*, I raised that part up, and thrust it out in pieces with a round-pointed Knife fitted to that purpose, then dressed up the remaining *Struma* with the milder Escaroticks. From the time I applied that *troch. de minio*, she complained that her right Eye was less than the other, and so was possessed with the thoughts of it, that I was glad to refer it to the judgment of what Physicians she pleased. Whereupon Dr. Glisson, Dr. Tho. Cox, Dr. Staynes, and Dr. Walter Needham were consulted. By this her Surmise I had the honour to have my work approved by so many knowing persons, and she was the more encouraged to admit of my Proceeding. The Cure was effected afterwards in the space of 3 weeks to her satisfaction: yet she would not be dissuaded but that Eye was less than the other. About a year after I saw her again in the Town, and felt a small Gland about the bigness of a Lupin lying lower on that side of her Neck. I would have perswaded her to admit of a resolvent Emplaster, and to be touched; but she did not (as she said) believe it to be the *Kings-Evil*.

A Person of about 19 years of age had many *Strumæ* on both sides of her Neck, one especially very large on the left side, reaching from her Ear downwards, of an oval figure. The extirpation whereof having been attempted in the Country by Knife and Escarotick unsuccessfully, she was brought to London, and put into the hands of Dr. Walter Needham and my self. The Physician began with the purging her by this: *℞ tamarind. ʒiʒ. fol. senæ ʒiij. rhab. ʒj. sem. coriand. ʒss. infund. in. aq. font. q.s. ad ʒiiiss add. manna opt. ʒvj. syr. de spin. cervin. ʒss. aq. menthæ ʒss. Misc. & fiat potio mane sumend. cum regimine.* She was afterwards frequently purged with this: *℞ rhab. senæ, an ʒiij. hermodact. ʒss. zinziber, ʒiij. passular. exacinat. ℥j. Misc. S.A. & fiat sacculus pro 3 congiis Ale recentis.* There was also prescribed her as followeth: *℞ lign. guaiaci ʒij. cort. ejusdem ʒj. sarsæ, sassifr. an. ʒij. China ʒiij infund. & coquant. in aq. font. q.s. ad ℥ix. deinde rad. scrophular. maj. filipend. an. ʒiij. passul. maj. ʒij. glycyrrhizæ ʒj. coletur pro potu ordinario. ℞ olibani, matricariæ pulv. subt. an. ʒj. sacchari alb. crystallin. ʒij. Misc. & fiat dosis una mane, & altera horâ quartâ pomerid. in cochlear. decoct. superscript. & superbibat haustum, quarta quaque nocte capiat pil. stomach. è gum. ʒij. in 4 pilulis, pergat ad 20 dies.* After her Body was thus prepared, we designed to have taken out the *Struma* by Incision: but it lying deep, and the upper part of it being grown to the Skin by reason of the former attempts, we applied a Caustick according to the length of it, defending it from spreading. The Escar being made as we designed, I divided it, and began to raise it off, with intention to take out the *Struma*: but she growing impatient of the smart, I rubb'd deep into the body of it with a Caustick-stone, and fill'd that Escar with *Merc. præcipitat.* applying Pledgits of *unguent. basilic.* over it; then embrocating the Parts about *cum ol. ros. & aceto*, drest it up with *empl. è bolo*, Compress and Bandage. The 4. day we opened it again, and repeated the use of [the Caustick-stone and *ol. vitrioli* interchangeably, penetrating thereby deep every way into the *Struma*; then dressed it up with Lenients as before. By this way of dressing we eradicated the *Struma*; and afterwards by rubbing it with the Vitriol-stone here or there where any little

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little relique of it appeared, and dressing it with Doffils dipt in *Merc. præcipitat.* we digested it. I being then obliged to a Journey into the Country, left the finishing the Cure to my Kinsman *Jacques Wiseman*, who by lessening the Doffils gradually, permitted the Ulcer to heal within, and by Epuloticks and Bandage brought the Lips to unite; so that at my return I saw it cicatrized smooth and narrow, and the *Struma* totally eradicated. The other *Strumæ*, which had been big, seemed also well-nigh resolved: yet upon the cicatrizing that Ulcer she was seized with an *Erysipelas* on her Head and Face, which swelled them extraordinarily; but by Purging the Physician removed that.

6. Observat. of a *Struma* extirpated by Caustick.

A young Gentlewoman about 18 years of age, having been long diseased with a *Struma* on the left side of her Neck, reaching from her Ear down under her Jaw, and frequently subject to Catarrhs, and sometime Coughing of Blood; I began the extirpation of it by the application of a Caustick the whole length of the Gland. In dividing the Escar there discharged a small quantity of an albuginous Matter. After the separation of the Escar, a Cheesie substance came away, and the Gland lay hard underneath. I fill'd the Abscess with *Præcipitate*, and kept the Lips dilated with Doffils, repeating this method of dressing her every third day: during which Doctor *Micklethwait* was consulted, and prescribed Internals accordingly as he saw her obstructed. He met with many Difficulties in the removing those various Distempers arising from the acid quality in her Blood, it dissolving her Flesh, and threatening a *Marasmus*. By the continued use of the *Præcipitate* the strumous Flesh seemed to me consumed, and the Ulcer well disposed for incarning: when one day in dressing her I beheld a small white Bleb of flesh in the middle of the Ulcer, and pressing upon it with my Probe, penetrated deep into it. I pull'd out the Probe again, and bending it passed it into the said *Sinus*, and thereby discovered it hollow both above and below: by which it appeared I had incarned upon a false Foundation. I passed a Director into the said *Sinus*, and laid it large open the whole length. The work was neither painful nor bloody. I fill'd up the *Sinus* with Doffils, rubb'd the spongy Lips with the Vitriol-stone, and covered the Ulcer with *Præcipitate*, keeping the external Lips dilated as at first I had done. By the repeating this method the strumous Flesh was consumed, and the Ulcer smoothly cicatrized. But about a month after there appeared a Swelling in the same Part, to the great disturbance of my Patient: but it was only a Flatulency, which I soon discuss'd by the application of Discutients. From that time she hath been free of that Malady. She continued longer under the Physician's Care, and at length by his endeavours and the fresh Air, she recovered her health and strength, and is since a happy Mother.

7. Observat. of a strumous Tumour above the right *Scapula*.

A Man of about 30 years of age, of a tolerable good Habit of body, came to me with a strumous Tumour a little above the right *Scapula*. It had been of a long continuance, and some years before it had suppurated, and was opened by some neighbouring Chirurgeon: but he not thoroughly eradicating it, it grew again, and was very large, the Skin adhering to the upper part of it. I applied a strong Caustick on it; which having penetrated deep into it, I divided the Escar, and applied *troch. de minio* to it, then dressed it up with Lenients. After the separation of this latter Escar, I rubb'd it with a Caustick-stone under the edges of the first Escar, and into the *basis* of it, and interchangeably prest into the body of the Gland with *ol. vitrioli*; then wiping away the loose Sloughs and Blood, I fill'd it up with *Merc. præcipitat. Vigonis*, and dressed it with Lenients. After the separation of these Sloughs, I thrust out pieces of the strumous Flesh with the end of a *Spatula* somewhat bended and sharpened to that purpose. Thus I extirpated this great body of the Gland, and

and by the Use of the Vitriol-stone and Præcipitate I deterged and cicatrized it smooth; and so it remaineth to this day.

A Maid aged about 18 years came recommended to me out of the Country with a cluster of *Strumæ* lying behind her left Ear, along the *Musculus mastoideus*, down to the Clavicle. She had also a *Sarcoma* on the inside of her left Ankle. Sir *Fra. Pruji*. prescribed her a Course of Physick, by which her Body being prepared, I began with the Extirpation of the *Strumæ* by the Application of a Caustick from the uppermost part near the Ear downward, making the Escar about half an inch broad, then dividing it fill'd the Ulcer with *pulv. sine pari* of Sir *Alex. Frasc.* and applied Lenients over the Escar with *empl. è bolo*. The next day I stuped the Tumour with *decoct. malvæ, violar. &c.* and dressed it up with Lenients, continuing that way of dressing till the Slough which was made by the *pulv. sine pari* separated: then drawing the Lips wider open, and finding that I had penetrated into the body of the *Strumæ*, and that some of them lay loose, I passed in my bended *Spatula*, and thrust part of the Cluster out, some in pieces, others whole in their *Cystis*. That done, I wiped away the Blood, and fill'd the Cavity with *Merc. præcipitat.* applying Dossils of Lint and Lenients over all. By this Method of dressing I extirpated the *Strumæ*, and disposed the Ulcer to cure. During this I began with the Tumour on the Ankle, and having applied a large Caustick upon it, I made an Incision into it, and discharged a bloody *Serum* in some quantity: yet the Tumour did not sink. I fill'd up the Incision with *troch. de minio*, and dressed the Escar with Lenients, *empl. è bolo*, and Bandage. The fourth day after I took off Dressings, and, finding all well, repeated the Application of Lenients, to hasten Separation of the Escar; which in few days cast off, and the fleshy body within appeared to be a *Sarcoma*. I fill'd it with Sir *Alex. Frasc.* his *pulv. sine pari*, and dressed it again as before with Lenients, Compress, and good Bandage. These fleshy Tumours were not of so acute Sense as the most sorts of *Strumæ* are; but more difficult to extirpate, by reason of the many Veins and Arteries which brancht through the body thereof, and render'd it apt to bleed, and increase faster than I could take it down by Escarotick Powders. Upon which Consideration I proposed the actual Cautery: but that not being admitted, I made up some Trochisks *de minio* with a double quantity of *Merc. sublimat.* in the form of Tents: and as the Escars separated in any part thereof, I thrust in a Trochisk, which always caused the Blood to burst forth: but by the Application of the *pulv. sine pari* with Dossils dipt in *albumine ovi*, with good Compress and Bandage, I stopped it. By this Method I made way deep into the body of it: yet between the Trochisks and in the circumference it did rise upon me; which put me upon a necessity of using the Caustick-stone and *ol. vitriol.* The Use of these several Escaroticks caused Excoriation in the neighbouring Parts, which obliged me to dress them the oftner with Refrigerants, *unguent. alb. camphorat. &c.* Having thus extirpated the *Sarcoma* near its basis, I left off the use of the Trochisks, and for some days applied *pul. sine pari fo. Arden.* it being more powerfully drying, and less corrosive; then I applied a *Malagma* of *Celsus* in the form of a Cake round over it, with Compress, and laced on a streight Sock, to keep all fast. After I had thus wasted the *Sarcoma*, I dressed it with *Merc. præcipitat. unguent. tutiæ Vigonis, &c.* and by the help of the Vitriol-stone, *aq. calcis*, and the like, I smoothed and cicatrized the Ulcer. That of her Neck curing some Weeks sooner.

One about 11 years of age, of a sickly Constitution, was brought by her Friends to Sir *Fra. Pruji*. He consulted me in the extirpating a Strumous Tumour upon the *Aspera arteria*. It was composed of many several Glands, in the middle whereof one lay much more protuberant, of the bigness of a Hand-ball.

8 Obser-
vat. of
Struma
and Sarco-
ma extir-
pated by
Caustick.

9. Obser-
vat. of
Struma
with a fun-
gus of an
Artery.

ball. It was to my Judgment Atheromatous, but somewhat more tense; and I thought I felt Pulsation in it, but so small, that I doubted whether it were not rather in my Fingers: however, I desired a Chirurgion might be consulted; who accordingly was fetched, and concluded it an *Atheroma*. We agreed in the opening it by Caustick, and by eradicating that to make way for the remainder. After the Application of the Caustick we met again, and seeing the Escar almost large enough to take out the Tumour whole in its *Cystis*, we divided it, and began with our Knives to separate it: but the Child feeling it smart, and the Blood trickle down, it hinder'd our farther proceeding that way, so that we only cut off the loose Escars, and dressed it up with Lenients. The third Day Sir *Fra. Pruj.* met us there as we were taking off Dressings. The *Cystis* appeared to me the thickest and strongest I had ever seen. I could not think it was made to contain an Atheromatous Matter. I felt it again, and was contented to believe the Pulsation I there felt might be in my Fingers End; however I resolved to proceed warily; and to that purpose made a Puncture into it with a *French* Lancet, upon which a florid Blood trickled forth. The Apertion being small, it stopt by the Application of *pulv. Galeni cum album. ovi*, and we left her. The next day the Chirurgion and my self met, and considering the *Cystis* being disrobed of her natural Tegument, the Skin was not like to be re-invested with it again, we proposed to proceed timely in the preventing an Effusion of Blood. The way we designed was by Escaroticks, viz. *pulv. sine pari*. The next day we took off Dressings, and covered the *Cystis* with the foresaid Powder, applying Restrictives over all the Part, it being incapable of strict Bandage. Against the next Eruption we provided all things ready, both actual and potential Cauteries; yet with Consideration not to dress her till we were necessitated. The second Morning after we were both called early out of our Beds by a Messenger, telling us she had bled the most part of the Night. We dispatched our Servants away to prepare Dressings, and hastened after, and taking her out of her Bed, placed her in a Chair. I stood behind her to hold her steady, and had one Servant near me with a dish wherein were several Escaroticks, some stronger than other, also of different Sizes and Shapes. My Brother Chirurgion had his Servant near him attending the actual Cauteries in the Fire. In taking off the Dressings, the Blood burst forth with such a gush as gave no leisure to call for an actual Caution, nor was there possibility of using it with any Advantage. I presently thrust in a piece of *Merc. sublimat.* and prest a *Pastillus* of *Celsus* close upon it, and held it so with my hands; which stopt the Bleeding in a Moment. I held my Hands on it till we judged the Escarotick had secured the Bleeding: then they cleansed the Parts about with a Sponge, and refreshed the Patient with a Draught of a cordial Julep: after which the Restrictives were applied one over another over her Throat, up both sides of her Neck. I kept my hands upon them till they were dried fast on. Then we put her on a Crevat, and laid her again in Bed. It did not bleed; but she complaining daily of Pain more and more, we agreed to dress her the fourth day. I attended then with our Servants, preparing our Dressings, to stop the Blood and heal the Excoriations. My Copartner not coming, I took off Dressings, with Design only to dress the Excoriations: but they came all off together, bringing with them a very thick Escar. While I was looking upon the *Fungus*, I saw the Blood rise out of it in many places, as if it had been pricked with a Lancet. Those drops immediately enlarged their way, and bled forcibly in so many Streams. At first sight of it I applied a piece of *Merc. sublimat.* The Blood burst forth between my Fingers a while; but upon the applying a proportionable Pastil over the Sublimate the Bleeding stopt. Whilst I continued my hands upon it, my

Servant

Servant wiped away the Blood, and dressed the Excoriations with *unguent. alb. campb.* &c. and applied the Restrictives over all as before: which being dried on, a Crevat was put on, and she placed again in her Bed. From this Dressing I grew confident of Success, the former Escar appearing extraordinary thick and large, as well it might, considering the Caustick, (which was such as I would not advise to use in any case where there may be the least hopes to save their Lives without it.) Where the Opening is small, a Finger may stop the Bleeding of an Artery: but in a *Fungus* so branched, in a place so incapable of Bandage, what could have resisted such a gushing forth of Blood but *Merc. sublimat.* whose force is far more penetrating in such *Fungi* than a hot Iron: especially considering how the Blood would have dulled it by the way. The Use of the Sublimate the second time caused a Fainting and Palpitation of her Heart: in which case Sir *Fra. Pruj.* came again, and assisted us by his Prescriptions; yet it terminated into a *Ptyalismus*. The fourth day after this we met all together, and took off her Dressings, whereupon was separated a thick white Escar; the remaining body appearing like a glandulous Flesh, somewhat hard, and of the bigness of a small Chesnut. It bleeding no more, we dressed it with some of the milder Escaroticks, and the Excoriations with refrigerant Epuloticks, with Emplasters of *diachalcit.* &c. we wasted that *Fungus*, and also healed the Excoriations in the space of 3 weeks. There was a fair Opportunity of extirpating the remaining Glands: but the Relations suspecting perhaps that new Mischiefs might happen from some Branches of the same Artery, we cured this Ulcer, and left the Extirpation of the other to farther Consideration.

A Maid aged about 30 years, of a tolerable strong Constitution, came to me with a complicated Tumour lying on the left side of her Neck, from her Ear to the *Aspera arteria*, and so stretching over it upward to the other side of the Neck. It was soft, and seemed to be full of Matter, but without Inflammation. I made a Puncture into the body of it, and discharged a stinking Serum not unlike Horse piss. That being let out, the Tumour sunk, and felt unequally hard. I dressed it up with a Pledgit of *unguent. basilicon* and *empl. diachalcit.* The next day taking off Dressings, and seeing the Swelling lank, I applied a Caustick the length of two inches, about 3 Fingers breadth distant from the Ear; the Escar I divided, and discharged a foul Matter, and afterwards dressed it up with Dossils dipt in *Merc. præcip.* with Lenients over the Escar; and from that time hastened the falling off of the Slough. After the separation of it, I thrust out a different sort of Matter, not unlike that of an *Atheroma* and *Meliceris* mixt together. I passed in my Probe-scissors, and laid it open downward to the *Aspera arteria*, and pulled out with my Fingers several *Vesiculae*, some containing a foul Serum, others a gritty Substance. There also came away gobbets of Flesh, with which the *basis* of the Abscess seemed to be covered. Having thus cleansed it, I fill'd it up with Dossils dipt in *Præcipitate*, and kept the Lips dilated; repeating this Method of dressing every other day, and rubbing the Strumous Excrescences with the Vitriol-stone. The *Sinus* contracted narrower within; but the original of this Tumour being Strumous, it would not heal whilst there remained any hollownes, but fill'd with that sort of Flesh, and raised a Tumour. Upon sight whereof I applied a Caustick upon the upper part towards the Ear, and divided it with a pair of Scissors, then fill'd the *Sinus* with *Merc. præcipitat.* dressing the Lips of the Ulcer with Digestives. After the Escar separated, I applied my Endeavours to eradicate the strumous Flesh with the Vitriol-stone and *Præcipitate*, and cicatrized it from the Ear downwards; yet not without some Difficulty, the *basis* proving false more than once in one part or other. Some of this strumous Flesh

10. Obser.
vat. of
Broncho-
cele.

rising amongst the Vessels, and uniting over them, made *Sinus's* so deep, that I much doubted how to divide those without danger of these Vessels: but there being no Cure to be expected whilst this remained, I passed a Ligature with a small Probe under the *Fungus* and by Deligation of it, and Application of *Præcipitate*, I consumed the *Fungus*, and laid the deepest of them open: and afterwards by the Application of *Epuloticks* brought a *Cicatrix* upon them. Having thus well near healed the Abscess to the *Aspera Arteria*, I laid the other side open, and eradicated that part by the same Method as the former, and cicatrized it smooth.

11. Observat.
of
Broncho-
cele.

One of about 14 years of age came out of the Country recommended to Sir *Alex. Frasier* with a complicated Tumour of a great Bulk on the left side of her Neck and Cheek, arising under her Ear. It had been growing many years, and was without Inflammation. Her Body being prepared by a purging Apozeme, and Antistrumatics prescribed by her Physician, he commended the Extirpation of it to my care. Accordingly I met him at her Chamber. We designed the taking it out by Incision; and to that purpose, having all things ready, I made Incision into it. But the Blood trickling fast down, we forbore the Operation that time, and dressed it up with Astringents. The second day after we met again, and in taking off the Dressings saw it had not bled, nor was there any Pulsation to be felt in it whereby we might suspect any considerable flux of Blood. What did flow proceeded, as we supposed, from some small *Fungus*. Upon which consideration we resolved to eradicate this preternatural Tumour by Escaroticks; and began with the Application of a strong Caustick on the middle of it, according to the length of the Tumour. The next day we divided the Escar, and filling it full of his *pulv. sine pari*, I embrocated the Parts about, and dressed the Escar with *unguent. basilic. &c.* By the Application of this Powder we penetrated into the body of the Tumour: and after separation of the Sloughs, seeing no danger of its bleeding, we repeated the Use of the *pulv. sine pari*: and having thereby discovered the Tumour to consist of many several Species, *viz. Strumæ, Atheroma, Meliceris*, and *Steatoma*, we laid it more open by Incision, and with a crooked *Spatula* and our fingers pull'd out some of them in pieces, others whole in a Cluster, then fill'd it again with the said Powder, and dressed the divided Lips with Dossils spread with Digestives. By this Method we eradicated this great body: but in our approaching near that part of her Cheek which had bagg'd so long time between her Jaws, we found it penetrated, and the Liquor she took in her mouth diffusing it self into the Abscess, also the Matter made in the Abscess discharging it self into the Mouth. Whether this Opening was made by the Teeth, or fretted by the Acrimony of the Humour within, I shall not dispute; but it contributed much to the forwarding of the Cure there: for by Injections deterfive and drying we cleared that part of the Ulcer, and cicatrized it with the external part of the Cheek so close, that her Jaws were at liberty to chew her Meat, which they had not been in a long time before. The last Difficulty was in eradicating that part which lay in a manner round under the root of the Ear, threatening the very Organ. We laid it open, and by the milder Escaroticks at length eradicated the *Strumæ* there without offence to the Organ, cicatrizing it smooth the whole length of the Ulcer, by bringing the Lips together within a narrow *Cicatrix*, to the satisfaction of her Relations. During the Application of some of these Escaroticks, she was subject to a *Palpitatio cordis*, and did somewhat salivate; but was therein relieved by Sir *Alex. Frasier's* Prescriptions and restored to perfect health, which I have lately heard she yet enjoyeth.

A Youth of about ten years of age was brought out of the Country to me with a strumous Ulcer on one side of the Sagittal Suture. It was hollow the compass of a Half crown; and had discharged its Matter, and fill'd up again with strumous Flesh. I applied a Caustick on it, and after separation of the Escar consumed the *Struma* with *Merc. præcipitat.* then cicatrized it with *unguent. à calce* and the Vitriol-stone.

1. Observat. of an Ulcer on the Head.

A Lady brought her only Son to Town, who was about 7 years of age, of a sickly weak Constitution, obstructed internally with the *Kings-Evil* in his Mesentery and Lungs. He had externally many *Struma* under his Jaws, from his left Ear down to his right Jaw. Some of them were bigger than others, and ulcerated: one whereof had made its own way out, was grown callous, and lay protuberant in the form of an over-grown Excrescence. I desired the assistance of a Physician: but the Mother would not, yet promised if there were a necessity, she would at any time consult one. I began his Course of Physick with a Solution of *syr. de rhab.* in a Tincture of Sena, and prescribed him a medicated Ale of *sarsa, lin. lentisc. China, ras. eboris, rad. rusci, scrophul, &c.* with *millepedes.* I dressed the ulcerated Glands with *unguent. basilic.* and *Præcipitate*, and after Deterision with *unguent. diapomphol.* to the other Glands, which were hard and intire, I applied *empl. diachyl. treat.* as it is set down in the method of Cure. during which application, I purged him again, and with a few grains of *diagrid.* and *Merc. dulc.* vomited him once: it worked churlishly with him. That night I sent him some of the anodyne Syrup to take in a draught of Mace ale; which quieted the Ferment raised by the Physick. From that time I purged him with Infusion of Rhubarb in his medicated Ale once a week, giving him 7 or 8 grains of *Calomel.* the night before he drank his Rhubarb: the intermitting days he took one of the testaceous Powders prescribed in the method of Cure. The callous *Struma* I rubb'd down with the Caustick-stone, and after separation of the Escar I deterged with the Vitriol-stone, and sometime *Merc. præcipitat. rubr.* The ulcerated *Struma* digested well, and as the Glands wasted, the Ulcers cured. To the other Glands not ulcerated, I applied a *Malagma* of *Corn. Cel-sus,* by which they visibly resolved. Whilst I proceeded in this method, Dr. *Micklethwait* was consulted by the Mother, he being her Physician. He saw the Patient in this thriving condition, and, I think, prescribed him only a cordial Julep. The Winter approaching, I supplied the Patient with Dressings and internal Remedies, shewing his Maid how to apply them, and directed her how to regulate the Patient. The Cure of these Diseases is the work of time: for till the internal *Viscera* be free of the *Struma* which generally they are stuf with, the external Cure of them signifieth little. They returned into the Country, and the Child enjoyed a good measure of health till about *Christmas,* and then the Matter fermented again internally and externally, that Air disagreeing with them: upon which account they returned back to *London* early in the Spring, and sent for me again, and, I think, for Dr. *Micklethwait.* The Child was put into much the same Course of Physick as before. I also digested the Ulcers, and proceeded as I had done the last year: the Child accordingly recovered, and enjoyed a good health. His Maid being grown skilful in dressing him, I visited him the seldomer, yet sent my Servant oftner: for, as I have said, his Cure did not consist in the healing these *Struma*; yet they were in a good condition, and not at all painful, unless it were sometime when I used the Vitriol-stone and *Præcipitate* together, which was seldom. He being well recovered, returned into the Country towards Autumn, and came up the Spring following indisposed with a Catarrh and

2. Observat. of Ulcers about the Chaps.

other Diseases in his Bowels ; but soon recovered here, whereas the Northern Air was too sharp for his tender Body. During the time I attended him, he was as much grown and improved in his health as ever I saw any, and the *Strumæ* that were remaining were few, and much diminished : the *Malagma* of *Celsus* put them upon a Suppuration whensoever it was applied ; and I always permitted the Matter to make its own way out by small Eruptions : during which I ordered them to be dressed with Lenients, viz. *unguent. diapompholyg. tutiæ*, or such like, till the Matter was discharged ; after which I applied the *Malagma* again, to put the remainder upon Suppuration. This way I shewed his Maid, and by these interchangeable Applications they did resolve. The Mother did not this last time consult Dr. *Mickethwait* nor my self in Physick, but imployed some other secretly. Upon notice thereof I visited them less, and told the Mother, that where I did not prescribe the Physick, or was consulted with the Physician, I did not desire to be the Chirurgeon, the Cure depending most upon the internal Prescriptions. Some weeks after, visiting the Patient, I saw one of the *Strumæ* thrusting out of the Skin in a *Fungus*. I would have thrust it more out, tied a Thread under it, and have snipt it off with a pair of Scissors : but he crying, I dressed it up with *Præcipitate*. At my next visit I met a Chirurgeon there, and presented the case of the Patient to him, with my way of proceeding. He saw me dress the Ulcers ; they were but few and small. He declared the way had been rational, and that such Diseases did require time to perfect them.

3 Obser-
vat. of Ul-
cers in the
Neck, and
an *Athero-
ma* in the
Arm.

A young Gentleman, aged about ten years, was diseased with many *Strumæ* : some whereof lay under his Jaws and the side of his Neck, stretching down from the one Ear to the other ; some of them lay intire in their *Cystis* ; others were ulcerated, and passed their Matter into one another : they were fordid in some parts, and over-grown with loose Flesh in others. He had also an *Atheroma* on the outside of one of his Arms about three inches in length, reaching to the Elbow-joynt. Sir *Alex. Frazer* was his Physician, and put him into my hands. He purged him with an Infusion of Sena, Rhubarb, &c. and prescribed him a *decoct. sarsæ*, &c. with Antistramatics. I began with the Application of a Caustick on the *Atheroma*, laying it open the whole length, and gave vent to an albuginous and cheefy Matter ; then dressed it with Lenients, to hasten separation of the Escar. I also laid open the Sinuous Ulcers in his Neck, some by Caustick, other by Probe-scissors. Those Ulcers which were fordid, I dressed with *Mercur. præcipitat.* rubb'd the luxurious Flesh with the Vitriol-stone, and kept the incised Lips dilated with Dossils spread with Digestives. Whilst I deterged those several Ulcers, I endeavoured resolution of the lesser *Strumæ* by the Application of some of the Discutients proposed in the method of Cure. During these proceedings in Chirurgery, Purgations were repeated, with the addition of *Calomel*, and on the intermitting days *cerussa antimonii*, &c. were prescribed ; and thereby the Ulcers were disposed to a healing condition. The *Atheroma* on his Arm I endeavoured to digest with various Medicaments : but whilst any part of it lay hollow it would neither digest nor deterge : but after I removed its Coverture it digested and incarnated with *mundif. Paracelsi*, and cicatrized as the other did by the common Epuloticks.

4. Obser-
vat. of Ul-
cers on the
Neck.

A person about 28 years old, having been long diseased with the *Kings-Evil* in many Glands on both sides of her Neck, frequenting apostemating with great tumefaction and pain, came to London, and consulted me. Those on the left side were then swelled from the Nuke down that side of the Neck and Cheek to the other side of the *Trachea arteria*. Whilst she was in the Country, that Gland near the Nuke apostemated, and was opened by a Chirurgeon there : but
from

from that time it grew corrosive, and passed its Matter downward into the body of the Tumour amongst the rest of the Glands, and could not empty it self but as it over-flowed. Upon which account I proposed the making it an Opening in the declining part of the Tumour: but she, having been extremely over-watched and tired with pain, took deliberation, and after a day or two sent to me to meet at a Consultation with one who pretends great matters in Chirurgery. I accordingly went: but he had been there before me, and, according to his custom, boldly undertook the Cure, promising to resolve it in ten days by the application of an incombustible Sulphur. I did not believe it possible to cure her without giving vent to the Matter below, but left the Patient at liberty to proceed with him, or any other. He began the next day with the anointing it with *bals. sulphur. Rulandii*, and every day daubed more of his said Balsam upon the Swelling, till the ten days were passed. During which applications, the Matter being thereby choaked in, her pain increasing more and more, and she being no longer able to endure those applications, she sent for Sir Alex. Frazer, Sir George Wakeman, and my self. We saw the Tumour exceedingly increased, and crusted hard over with the Balsam. I fomented it with Milk, and embrocated it with fresh Butter: but it not yielding thereby, I applied a Cataplasim *ex fol. malvar. violar. sem. lini, pane tritic. acun. porcina*, &c. The next morning we met again, took off the Cataplasim, freed the Tumour of its crusted Coverture, and saw the same hard, dry, and much inflamed. We added to the former Cataplasim *mucilag. rad. altheæ & lilior.* and applied it, thereby suppurating it; then opened it by Caustick in the declining part near the *Trachea arteria*, discharged a large quantity of digested Matter, and dressed it with Liniments. Whilst the Matter plentifully emptied it self there, the Inflammation and Tumour daily diminished, and the Ulcer above, which had been daubed close up with the *bals. sulphuris*, appeared well inclined to heal, and cicatrized soon after by the applying of *unguent. tutia*. The accidents of Pain, &c. thus removed, the Physicians were again consulted; and hearing her still complain of a *Vertigo* and great pain in her Head, as likewise of an Inflammation of her Eyes, they prescribed her a purging Apozeme of *sena, polypod. hermodact. turbit* decocted with *sarsa, lign. guaiaci, santal.* &c. She was also purged with Cephalick Pills. *Calomel.* was also prescribed, and a *decoct. sarsæ*, with the specifick Plants, was her ordinary Drink. By these and such like Prescriptions she was freed of those various Distempers, and restored to a better Habit of body. The Tumour the while emptied it self by the depending Orifice, and several of the *Strumæ* which had been encompassed within that Tumour appear'd again movable, and were afterwards totally resolved by the application of *Celsus's Malagma*, and by the Apertion made by the Caustick cured perfectly. The *Strumæ* on the other side of her Neck, which seemed suppurated when I first came to her, did all save one harden again, (during her Course of Physick.) That one lay upon her Cheek near her Ear. I opened it, and thrust out a Cheesy Matter; then dressed it as abovesaid with Deterfives, and cured it. The Patient being thus happily recovered, I supplied her with a Rowl of *Celsus's Malagma*, by which the remaining *Strumæ* were resolved or suppurated: and since that I have seen both sides of her Neck freed of that Disease. Yet she is still subject to some little Indisposition of body, enough to shew that there yet remain some seeds of that Disease in her *Viscera*.

A Gentlewoman aged 34 years, of a sickly weak Constitution, subject to the *King's-Evil* many years on both sides of her Neck, ulcerating, and the Ulcers passing their Matter one into another down to the Clavicles, had gone through long Courses of Physick, and had permitted divers applications to be

made: but they proving unsuccessful, she put her self into the care of Sir F. Pruj. and my self. The Ulcers seemed to have risen from so many distinct Glands, and that after Suppuration, the Matter, growing virulent, corroded under the Lips, and both rendred them Sinuous, and at length Callous, and consequently not capable of Cure but by laying open. Yet I began with Digestives, and discutient and drying Fomentations. The Physician prescribed lenient Purgatives, with the addition of *Calomel.* once in 4 or 5 days, and on the intermitting days *decoct. sarsa* with *antimon. diaphoret.* These not answering our expectations, I proceeded in the laying open the Ulcers, and removing the callous Lips, there being not one that would cure till that was done. Afterwards they digested, incarnated, and cicatrized from the edges firm and smooth, by the common method of dressing Ulcers.

6 Obser-
vat. of
Strumous
Ulcers in
the *Axilla*
and Arm.

A Citizen's Daughter, aged about 12 years, of a weak Constitution, had been long diseased with the *King's-Evil.* She had one Strumous Swelling on the right side of her Neck close above the Clavicle, from whence to the *Os humeri* there seemed to be a more than usual fulness. Under that *Axilla* lay an Ulcer, and another on the outside of the same Shoulder, and others down all along to the Elbow, some of them sordid. By search of a Probe these Ulcers appeared to be so many Eruptions from the Sinuous Ulcer in the *Axilla.* I dressed them with Deterfives, &c. and prescribed a *decoct. sarsa, China, lign. lentisc.* with some of the antistrumatick Plants, *milleped.* &c. with which she took *antimon. diaphoret.* and once in 4 days a few grains of *Calomel. cum pulv. rhab.* in the form of a *Bolus.* I embrocated the Gland near the Clavicle and the Swelling of the Shoulder daily with *valentia digitalis,* and endeavoured the Deterfion of the Ulcers with *mundif. Paracelsi,* Precipitate, and the Vitriol-stone: but the Ulcer being Sinuous, (as I said) it would not digest in any one part. The Fluxion increasing greatly, and seeming to flow from that Ulcer in the *Axilla,* I laid it open: but that not serving my purpose, I cut open the upper part of the *Simus* on the outside of the Arm near the Shoulder, hoping that way to intercept the flux of Humour; but the Fluxion continuing, I began to suspect the Matter flowed from the Strumous Tumour near the Clavicle; wherefore I opened it, and upon search found the Matter did pass from thence into the *Axilla,* and to the outside of the Arm. I discharged the Matter, and eradicated that *Struma:* after which the Fluxion diminished in the other Ulcers. That of the *Axilla* dried up soon after: the other also cured more easily, according to the method set down in Sinuous Ulcers, and she recovered her perfect health.

7. Obser-
vat. of
Ulcers in
the Head,
Neck,
Lips, &c.

A Woman came out of the Country with a diseased Child of two years old, She had brought many into the World, but they had been all lamentably diseased, and died one after another. This was broken out all over the Head, and ulcerated in many places to the *Pericranium.* It had also a large white Tumour lying deep under the left Jaw to the *Trachea arteria.* I fomented the Head with a Decoction of Cephalick Herbs, *cum flor. ros. rub. bacch. myrtill. balauft.* in Wine and Water, and dressd the Ulcers accordingly as they required, some with Digestives, others with Deterfives, and others with Epuloticks; and to the Tumour I applied Discutients. During these Applications I purged the Child once in 4 or 5 days, giving it 4 or 5 grains of *Calomel.* over night, and in the morning *syr. de rhab.* in medicated Ale of *sarsa, lign. lentisc.* &c. and the intermitting days *Bezoard. mineral.* Before I put her into this Course, the Humours were so acrimonious, that the least scratch with a pin terminated in a corrosive Ulcer: but after she had proceeded in this method a while, they all healed. So that there remained only the Tumour under the Jaw, which seeming full of Matter, I thought reasonable to open: but she
having

having privately consulted some person, who, in consideration of its situation, thinking it dangerous, dissuaded her from it, upon notice thereof I left them. But some weeks after, having tried other Endeavours unsuccessfully she came to me again; the Child being broken out for want of prosecuting the former method of *Calomel*, &c. and also diseased with a Cough. I began with the opening of the Tumour, designing to do it by Caustick: but in consideration of the Prognostick which had been delivered of it, I made an Apertion with a Lancet, and passing in a *Cannula*, discharged a spoonful or two of a purulent Matter: which confirming my Judgment of the Tumour. I stoppt it up with a Tent, applied a Caustick the hole length of it, and the next day divided the Escar, and gave vent first to a purulent Matter, then to an albugineous Humour. I dressed the Ulcer with Dossils spread with *mundif. Paracelsi*, and the external Escar with *unguent. basilic. cum ol. lumbricor.* After Deterfion the Ulcer fill'd up with an *Hypersarcosis*, as all Strumous Ulcers are apt, and so render our labour vain. Therefore timely to prevent it, I dressed it with *Merc. præcipitat.* and kept the Orifice dilated with Dossils. While I was thus eradicating the *Struma*, I repeated the former method of Physick, and healed the several Ulcerations about the Head, Face and Lips. All things thus succeeding well, the Mother returned into the Country with her Child, unknown to me, (supposing it cured:) but she not taking Specificks with her to prosecute that method there, it languished and died, as I was afterwards informed.

A Child of about 3 years old had an Ulcer with *Caries* upon the right side of the *Os frontis*; close by the Temporal Muscle. I took its original from an *Atheroma*, as I suppose, (the Child having some *Struma* on his Neck.) The Bone lay carious the compass of half a *Guiney*. I took off the Lips of the Ulcer by Caustick, and dressed the Bone with Dossils prest out of *spir. vini.* to keep it dry till Nature should be disposed to make Exfoliation of its rottenness. For in this tender Child there was no talk of rasping, nor was there always liberty to put in my Dossils so close as I ought to have done. During this work the Child was afflicted with the Meazles, and in the declination of them with a Cough, and such a discharge of Matter from his Lungs, that he grew thereby Hectick, and emaciated to skin and bone. The Lips of the Ulcer on his Head lay lank and dry, and the Bone as it were dead without moisture. He being thus weak, Dr. *Bates* was consulted, and declining the attending it, as coming too late to him. Dr. *Tho. Cox* was perswaded to take care of him, who prescribed Pectorals of various sorts, and advised the removal of him to *Knights-bridge*, where he drank Asses-milk. Having there somewhat recovered, he was removed to a house near *Kings-Gate*, into back Lodgings looking into the Fields, for benefit of the Air, and more conveniency of Dressing the Ulcer on his Head. But upon the change of the Air he so relapsed in 2 days, that it was believed, if he had lain one night more there, he had died there. Upon which consideration he was again removed back to *Knights-bridge*, and there he daily recruited his spirits. As his strength recovered, the Lips of the Ulcer recovered their heat, and digested, the *Caries* of the Bone cast off, and the Ulcer contracted narrower. He afterwards removed farther off into the Country; to his Parents: my Kinsman *Jaques Wiseman* attended him, and finished the Cure there.

A Child about 3 years old was brought by its Mother out of *St. Martin's Lane* to me with a large soft Swelling upon the left side of the Head without inflammation. I, suspecting the Bone carious, applied a proportionable Caustick on it, and gave vent to a Matter not unlike Batter, and by search of a Probe felt the *Cranium* bare. I dressed it with Lenients, and after separation

8. Observation of an Ulcer with *Caries* in *Cranio.*

9. Observation of an *Atheroma* with *Caries* on the *Cranium.*

of

of the Escar saw the *Cranium* bare the compass of a broad Shilling. I dressed it up with *liniment. Arcei* hot, and the Lips of the Ulcer with *unguent. basilic. magist.* The second day I fomented it with a Decoction of *summitat. hyperici, origani, betonicae, flor. ros. rub. balaust.* in Wine and Water, and dressed the Bone with Dossils of Lint prest out of *spir. vini*: the Lips I dress with *unguent. diapomp.* touching them sometimes with a Vitriol or Alum-stone. By these Applications the Bone incarned, united with the Lips of the Ulcer, and cicatrized from the edges round. During which some small Speels of Bones cast off, and the Ulcer cicatrized without much difficulty.

10. Obser-
vat. of an
Atheroma
with *Cari-*
es in *Cra-*
nio.

A sickly Child of about 7 years of age was brought to me by its Mother out of *Drury-Lane*, having a large *Atheroma* between the Sagittal and Coronal Sutures. I, supposing the Bone carious, applied a large Caustick on it, and dividing the Escar discharged a crude *Serum*, and afterwards a curdled Matter. I felt the Bone carious round under the Escar, and dressed it up with Lenients: after the Sloughs cast off, I dressed the *Cranium* with Dossils prest out of *spir. vini*, applying them close to the sound Edges; the Exfoliation beginning always from the circumference. By which may be judged the ignorance of that Man, who applied Lint dipt in Red wine over the middle of the Bone, leaving the Lips hollow. By this way of dressing, a *Callus* rose from the sound Edges, and thrusting off the *Caries*, united with the digested Lips of the Ulcer, and at length cast off all the rotten Shell, and incarned and cicatrized firm by the method observed in the former Observation. I have since seen this Girl diseased with many *Strumæ* in her Neck, and purpose to undertake her Cure when the season shall be more proper.

11. Obser-
vat. of
Spina ven-
rosa in
Cranio.

A Woman of about 40 years of age, of a Plethorick Body, having been long diseased with a pain in her Head on the right side, between the Sagittal and Coronal Sutures, it at length apostemated, and she was put into my hands. I made a search with a Probe, and feeling the Bone carious, opened it by a circular Incision, taking away so much of the Hairy-scalp as I judged necessary; then fill'd it with Dossils of Lint, and lapped over them Pledgits *cum albumine ovi & pulv. Galeni, empl. è bolo, &c.* The third day taking off the Dressings, I saw the upper *Lamina* very white, dry and thin: it was corroded, and seemed chambered like unto that Fracture the Greeks call *Camarosis*, or like some piece of old worm-eaten Timber. I dressed it with Dossils prest out of *spir. vini*, and the Lips of the Wound with a Digestive, *ex terebinthina cum vitell. ovi, &c.* embrocating the Parts about *cum oleo ros.* After Digestion of the Wound I designed the rasping away that thin Shell: but her pain ceasing, it was deferred. About the tenth day she was taken with a Fever. The Physician visiting her, I dressed her Head, and offered to his consideration the setting on a Trepah. But he concluded the Fever scorbutical, and no way related to the Ulcer in *Cranio*. But the Fever increased, and she died. The Physician being indisposed with the Gout, another was fetcht, who saw her opened. At the taking off the *Cranium*, the interiour *Lamina* appeared sound, and the *Dura mater* unconcerned; nor was there any Bloud or Matter extravasated between the Membranes or Ventricles of the Brain; but in the Lungs a great Stagnation. When this Matter affects only the interiour *Lamina*, the Patient generally dies before the Malady is discovered.

12. Obser-
vat. of a
Struma
with *Cari-*
es in the
Os Zygoma.

A little Girl was brought by her Mother to me with a soft Tumour, of the bigness of a Nutmeg, upon her left Cheek, on the *Os Zygoma*. She desired me to undertake the Cure. But I, being at that time much indisposed in my health, declined the meddling with it, concluding the Bone carious, and that it was not so slight a work as she thought. The Mother went from me to a Chirurgeon then in my Neighbourhood, who opened it, and took much

much pains in the exfoliating the Bone : but it growing more carious, he at length left the Parents at liberty to make choice of some other. They came to me again. I made search with a Probe, and felt the *Sinus's* running under the Bone towards the Eye. I dilated the Ulcer, and, seeing the Bone black, applied a Doffil pressed out of *spir. vini* on it, kept the Orifice open with a Doffil spread with a Digestive, and embrocating the Parts about *cum ol. ros. & aceto*, dressed it up with *empl. è bolo*. By this way of dressing the pain was mitigated, and the Ulcer digested. I continued the use of the Doffil with *spir. vini* to the Bone daily, and dressed the Ulcer with a Pledgit of *diapomphol.* By this very method the rottenness of the Bone soon shell'd off: after which, by lessening of the Doffils, I permitted the Ulcer to incarn, and by gradually leaving off the use of the Doffils, and dressing it with Pledgits of *diapompholyg.* it cicatrized firm in the space of three weeks, and continueth so to this day.

A person of about 26 years of age came to Town with an Ulcer in her Cheek penetrating high under the *Os Zygoma* : there was also an Ulcer near the external *Canthus* of that Eye. I supposed them to have cohered with one another, and by search of a Probe felt the Bones carious. Her Cheek had been much apostemated and blemished by their Chirurgery in the Country, and like to be made worse, if the Bones were that way to be exfoliated. Wherefore I considered to do it otherwise. The Teeth in that *Maxilla* were all sound and fast ; yet I perswaded her to the pulling out of one under these Ulcers. She seemed to receive some advantage by it, the Ulcer mattering less for the space of 4 or 5 days : but both the Ulcers growing afterwards worse, and our hopes of Cure that way failing, I enlarged the lower Orifice, and rubb'd off the over-grown callous Lips with a Caustick-stone, and proceeded in the deterring and digesting the Ulcers. During which Dr. Willis was consulted : but upon supposition she might be with Child, she took little Physick. By dilating the inferiour Ulcer the uppermost closed up, that Matter discharging it self by the Ulcer beneath, but not without much disturbance, it threatening a *Sinus* down her Cheek. To avoid which, I caused an Instrument to be made whereby I cut between her Cheek and Jaw into the Ulcer to the carious Bone, and gave vent to the Matter. After I had thus laid open the *Sinus*, and wiped away the blood, I dressed it with a Tent dipt in *syr. de ros. siccis*, and the external Ulcer on the Cheek with a Pledgit of *unguent. tutie*, and by Compression cicatrized that smooth and firm. The Ulcer within her Mouth growing offensive to her by reason of the foetid smell of the Bone, put me upon the use of an Injection of *aq. ros. damasc. syr. de ros. siccis*, and a few drops of *tinct. vitrioli Felix wortz* : by which the Ulcer deterged, and grew daily less offensive. I continued the dressing it with a Tent whilst any thing of Matter discharged. That ceasing, I omitted the use of Tents, and healed up the Ulcer, and so it is like to continue.

A Child between 3 and 4 years of age, having been subject to sore Eyes, and an Abscess in one of its Ears, was brought to London, and commended to my care. The Matter at length made its way forth behind that Ear, and flowed in great quantity. Upon search I found the Bone carious. I began my work with Dilatation of the Ulcer by Gentian-roots; and after I had made way to it, I dressed it with Doffils pressed out of *spir. vini* and *unguent. tutie* upon Pledgits, or such like, accordingly as I saw occasion. Having thus disposed the Bone to Exfoliation, I purged the Child with *infus. rhab.* and afterwards with *Calomel.* once in 4 or 5 days, and prescribed *Bezoard. mineral.* also a medicated Ale, to take the intermitting days.

After some time, seeing the Bone continue firm, I dressed it with a mixture of

13. Observation of strumous Ulcers with Caries in the *Os Zygoma*.

14. Observation of an Ulcer with Caries behind the Ear.

of *mel. Ægyptiac. pulv. myrrh. &c.* and thereby hastned the Exfoliation of the Bone. That being cast off, I designed to cicatrize the Ulcer: but perceiving the Eyes grow sore, I put a Pea into that Ulcer, and continued it a Fontanel; not thinking it safe to dry up the Ulcer behind the Ear, though the Child had before one proper for Derivation. The dressing this Ulcer was never very painful: but the Servant that attended the Child having accustomed her self to put it beside its Forwardness by threatening to send for me, it so terrified the Child, that it always cried at the very sight of me; upon which account I left her in the condition I have represented. She was long after diseased with sore Eyes from the acidity in her Blood, but hath since out-worn it.

From a *Caries* in the *Alveoli* Apostemations are frequently made externally under the Jaws; which being not unlike strumous Tumours, are by unexperienced people supposed to be such, and sent to us to be presented to his Majesty. Many Instances may be given you of this kind, if it were necessary: but they not being Strumous, I shall forbear, and present to you what is, *viz.* the protuberant Jaws. They are made hollow by an acid Humour, which fretteth and corrodeeth the *Alveoli* and inner substance to the very external Shell; in which cases they thrust out with great deformity. I have made mention of this Disease under the name of *Spina ventosa*, and distinguished it from the *Caries* arising from an external Erosion by that name. When this affects the Jaws, the Teeth grow loose, and Excrescences do arise, which in progress of time thrust out the Teeth. They sometime discharge their Matter externally. But by pulling out those Teeth these Apostemations cure and the Jaw having thereby vent for its Matter, the *Caries* will cast off insensibly by the force of Nature, and at length, if the Habit of body grow better disposed, a *Callus* fills up the void space in the Bone. But where Nature is deficient, we consume the *Caries* in them by deterfive and drying Medicaments, or by actual Caution: after which, if the Patient be young, he groweth out the Deformity.

15. Observat. of external Ulcers from a *Spina ventosa*.

A Child aged 9 years, having been formerly diseased with the *Rachitis*, and afterwards with the *King's-Evil*, the left Jaw grew preternaturally big, and her Teeth in it rotten and loose: an Apostemation also had discharged itself externally under that Jaw in 3 several places. I caused some of those Teeth to be pull'd out, and dressed the Ulcer with a Tincture of Vitriol. I prescribed Internals, according to the method of Cure; then rubbing off the callous Lips externally with a Caustick-stone, and digesting them, they cicatrized without laying open or trouble in dressing, the Matter spending it self within, where it was not taken notice so much of.

16. Observat. of *Spina ventosa* in the left Jaw.

A Gentlewoman about 40 years of age, having been many years diseased with the *King's-Evil* and a *Spina ventosa* in her left Jaw, put her self into my hands. She had formerly Apostemations under that Jaw externally; but the Matter having made its way out by loosening some of her Teeth (which afterwards dropt out,) those Ulcers were in a manner healed up. The place where her Teeth had fallen out was fill'd with a putrid Flesh, which was very offensive to her by reason of the rottenness of the *Alveoli*. In this case there remained nothing to do, but to consume and dry up the corrupt Flesh and Bones; which I did by actual Caution to the very end of the Mandible, laying it hollow like a Trough. I was troubled in my thoughts to see it so, suspecting it would prove an unthankful work, to leave such a useless Cavity: but it was done to save that Jaw. I dressed it up with Dossils dipt in a mucilaginous Decoction, and after Digestion with Dossils dipt in *spir. vini*, the sides of the Mandible were dried by the actual Caution, and being thin, they cast off, and the Gum lay flat, and served her afterwards to chew softer food.

A Young

17. Observat. of Spina ventosa in the inferior Maxilla.

A Youth about 15 years of age came to Town with a *Spina ventosa* in the inferiour left Jaw, the two farthest Teeth being thrust out with a *Fungus* rising in and about the *Alveolus*. It had passed its Matter externally on that side of his Neck and under that Jaw; also an Apostemation had been raised on the upper part of that Jaw externally near the insertion of it, between the Ear and the Cheek, in which place the bone was carious round. It had been laid open by a Chirurgeon in the Country, who designed the cutting it off. I rubb'd that bone with *ol. myrrhæ distillat.* and kept the Ulcer dilated with Dossils prest out of *spir. vini*. The *Fungus* in the Jaw I consumed with the actual Cautery, pulled out pieces of the corrupt *Alveolus*, and disposed the rest to cast off soon after; then dried up the remaining *Caries* in the Jaw, and afterwards drest it with Dossils prest out of *tinctura vitrioli*. Whilst this was doing, I rubbed off the callous Lips of the external Ulcers by Caustick, opened their *Sinus's*, and disposed them to speedy cure. After the cicatrizing of the Ulcer in the Jaw, it lying hollow and subject to Excrements, I fill'd it with soft Wax. Having thus cured those Ulcers, and exfoliated the greatest part of the *Caries* on the external part of the Jaw near the Ear, I lessened the Dossils, permitted that Ulcer to contract proportionably, and supplied his Sister with Medicaments and Directions to finish the Cure, and dismissed him. It being the work of time, required a longer keeping open than consisted with their conveniency to attend it here.

In the year 1672. I was consulted by Letter out of the Country concerning a young Gentleman, whose Case I have here inserted as it was sent me.

18 Observat. of a Spina ventosa in the right inferior Maxilla.

Adolescens nobilis, 19 circiter annos natus, duobus abhinc annis correptus est gravi Dentium molarium dolore in Maxilla dextra, unde unius caries subsecuta est. Remittentibus doloribus, suborta est Gladula exigua (jam ferè evanida) in cuspide externa Maxillæ ex adverso denti primo vel secundo molari; exinde tumor Maxillæ indies auctus, qui videtur in ipsa substantia ossæ radicans, nullâ existente vel Cutis ipsius vel Glandularum circumquaque prominentiâ manifestâ, cum dolore exiguo vel nullo Maxillæ, nisi cum asperius digitis tractata vel fricata fuerit. Ex adverso latere circa eandem partem Glandula est exigua & mobilis. Tractatus est ab aliis Medicis cum Pilulis purgant. Mercurialibus, Dietis Scrophulas respicientibus, Antiscorbuticis, & externis etiam Emplastris de ranis & ex ammoniaco, Fomentationibus, &c. sine fructu. Veremur nò ex illo tumore pereat aliquid de venustate faciei Adolescentis,

Querimus quibus modis vel curetur vel saltem incrementum præcaveatur.

In answer to this, I advis'd the extracting of the Carious Teeth, to make way for the discharge of Matter, and propos'd Remedies to consume the rottenness in the *Maxilla*.

About half a year after the Patient was brought to me by his Uncle Mr. *Tho. Chol.* He had then a *Spina ventosa* or *Exostosis* very large upon the outside of the said Jaw, which threatned a total corruption of it. They demanded my Judgment in the taking it off. I reply'd if the Bone be thin, it may be cut off by passing an Incision-knife within his Mouth between the Cheek and his Jaw. If upon trial the Bone prove too hard or difficult to extirpate, the Wound will soon cure without Deformity. This was deliver'd by me with such hesitation as might have well shewed the little inclination I had to operate in it. Three or four Months after the Patient came to me with his Uncle Captain *Middleton*, and earnestly desired me to proceed in the cutting out that *Exostosis* the way I had discours'd of formerly to him. I advis'd them to consult Physicians and Chirurgeons in the undertaking. They consented to it, and sent to Dr. *Charlton*, (who had been one of his Physicians

in the Country,) Dr. *Walter Needham*, and Mr. *Hollyer*. We accordingly met, and together informed our selves of the nature of the Tumour and its situation, then retired to consult. The first question proposed was, whether the *Exostosis* might be cut safely off: which was unanimously granted. The next consideration was, of the way to take it out. But we differing therein, concluded to defer the Operation till the *Caries* in the Jaw should by its eruption make its own way through. Somewhat to this purpose we all subscribed, and delivered to the Patient; which he threw into the fire, and departed much unsatisfied with such a dilatory Answer.

The third day after we were consulted again, and concluded that Incision should be made between the Cheek and Jaw to the *Exostosis*, and that accordingly as the Bone should be discovered by the Knife to be hard or soft, so we should proceed in the sawing it off, or permitting the Wound to heal again. This we subscribed, and sent to the Patient; and I afterwards discoursed with him and his Uncle, and prevailed with them, that those who had been consulted might be present at the Operation. Accordingly they sent to them. In the mean time his Body was prepared by a purging Apozeme 4 or 5 days. Venæsection was deferred, in consideration that blood would be evacuated in the Operation.

In order to the Operation, the Patient having seated himself in a clear light, I passed my Knife between the outside of his Jaw and his Cheek lose to the *basis* of the *Exostosis* the length of it, and at that instant attempted the cutting of it: but it was too hard. I declared so, and asked them whether I should pull out the Knife. They all unanimously, with the Patient and his Uncle, declared that I should proceed with the Saw; of which there were two provided of equal size with the Knife. I pulled out the Knife, and passing in the Saw to the very *basis*, made a track: then put the Handle of the Saw into one of the Physician's hands, desiring them they would severally help in the sawing of the Bone; so should they be more satisfied in the work and ease me, who was too much indisposed in my health for such a business. They did severally take their turns, and had at that time sawed off the Bone, if we had not been interrupted by the weariness of the Patient, and the bleeding of a small capillary Artery in the Cheek. I dressed up the Wound with Dossils of Lint, to keep it dilated, and thereby stop the bleeding. We embrocated the external parts with *ol. ros. cum aceto*, and applied *empl. è bolo* over it. The third night the Wound bled afresh, whether it was caused by eating, or what other accident; but my Kinsman *Jacques Wiseman* stopt it with a Compress dipt in the Royal Stiptick held close with his fingers, and was relieved by others. But the Patient not permitting them to hold the Compress so close on as Mr. *Hollier* and my self advised, the Vessel was the longer in agglutinating, and raised an *Aneurisma* of the bigness of a Lupin, which lying in our way, we burnt it down by a small Button-cautery. This difficulty over, we all met again, and proceeded in the sawing off the Bone, and did all of us suppose we had finished that work, [which Opinion was occasioned by the *Caries* within it, which admitted of our Probes, and made the whole Bone seem loose,) and purposed then to extract it. But he pleading his weariness, we complied with him, dressed up the Wound with a Tent dipt in *vitello ovi*, and fomenting the external Parts, dressed them with Lenients; by which the parts were eased, and the Wound discharged a well-digested white Matter. In this condition I left the Patient (with their leaves,) to make a Journey into the Country 4 or 5 days; during which I grew more indisposed, and returned home grievously diseased, yet made a shift to visit the Patient, and urged the extraction of the Bone. Whether it was that he heard the Wound was to be

be enlarged, and that he fear'd a Flux of blood, but he put them off from day to day, and during my confinement to my Chamber, I had news of an approach of Convulsions; upon which I was carried to him, where we all met at a Consultation, and Dr. *Lowre* with us. It being suspected that this Accident was occasioned by some Shivers of the Bones pricking the Membranes, we resolved to hasten the extraction of them: but his Teeth being set, there remained no possibility of doing it that way. Therefore we resolved to apply a Caustick on the lower part of the Jaw externally, and by cutting through it to draw out the Bone. My hands being weak, Dr. *Lowre* marked it, and together they applied the Caustick, resolving to meet again that afternoon to divide the Escar and take out the Bone. But within few hours after the Patient sent for us to take off the Caustick. I went, and found an Escar made as was designed, but I had not strength enough in my hands to make use of a Knife. Dr. *Charleton* and Mr. *Hollier* were at a publick Dissection in our Theatre, where Dr. *Walter Needham* was Reader: only Dr. *Lowre* and *Jaques Wiseman* were to be found. They being come, my Kinsman divided the Escar, made separation of the Bone, and drew it out. I afterwards put in my finger, and feeling no Shiver, advised the dressing it up with *unguent. basilic.* hot. That evening they all met, and approved of what had been done, and hoped the cause being taken away the effects would have ceased. Dr. *Goddard's* Drops were prescribed, and Venæsection had been proposed; but being disputable, it was deferred. The next morning Dr. *Tho. Cox* met us at a consultation, and advised the Patient to be let blood, the Hair of his head to be shaved, blistering Plasters to be applied, and variety of internal Medicaments were prescribed; the Wound was opened and dressed: it was not without good hopes of Digestion, but the Patient died convulsive the third day after.

The Patient's Cheek was laid open in the presence of all the Physicians and Chirurgeons. The Bone was found sawed off without the least impairing of the Jaw; but it was very much eaten into by the *Caries*, and was spongy. The cause of the Convulsions seemed to be referrable to the Constitution of his body, and the Acrimony of the blood, which upon fluxion fermented, and produced that sad effect. We see frequently the same in little Maladies. The only drying up of a light Excoriation behind the Ears in Infants hath caused Convulsions. In the *King's-Evil* you may see many Instances of the fermenting of this kind of Matter most grievously upon the healing some one Ulcer.

The Monument at *Westminster* of the young Lady holding up her Finger prickt with a Needle, of which she died, may serve to shew you that in ill Habits of body small Wounds are mortal. As to this Operation, it was not dangerous, if you consider the great Fractures in the Jaws which we frequently cure; and that of late years I cut into the inside of a man's Cheek, sawed in pieces the *Alveolus*, and took out the whole Jaw, and cured him. That the Operation was necessary, appear'd by the rottenness in the Jaw upon dissection, and may be determined by all those who know what a *Spina ventosa* is, and consider the progress this had made in so short a time.

Having thus given you some Instances of the several *Strumæ* with complicated Tumours and Ulcers arising from them, I shall now shew you how the Tendons and Joints are diseased with various sorts of Tumours some whereof are without *Caries*, others with it, and others take their original from *Caries* in the Bone, commonly called by the name of *Spina ventosa*.

A Child aged 7 years was brought to me, which had a Gummy Swelling encompassing the Muscle *massoïdes* on the right side of her Neck: the Tendons

1. Observation of Gummy upon the Tendons, also

also of the Fingers of her Right Hand were affected with the like Swellings. She had also a frequent discharge of purulent Matter from her right Ear; also an *Ozena*, and thick upper Lip chapt. I caused the crusted Matter in her Nostrils to be suppled by the frequent injecting of *doct. hordei, sem. althææ, &c.* and afterward deterged the Ulcers with a Solution of *mel magistral.* in a Decoction *rad. bistortæ, tormentillæ, ireos, &c.* The Lip was dressed daily with a *Pomatum* of *unguent. rosat.* and *Merc. præcipitat. Vigon.* and the Gummy upon the Neck and Fingers were embrocated with *unguent. magist. ad strumas,* and an *empl. ad topfos* applied over all. During which Applications the Child was frequently purged with *Calomel.* and *diagrid.* and drank a *decoct. sarsæ, radic. bardanæ, scrophul. maj. flor. salviæ, beton. anihos, &c.* But the Cure not succeeding with these, I gave her a few grains of *theriac. metall.* by which she salivated: during which the Gummy Tumours resolved, and the several Ulcerations dried up: yet to confirm her Cure, she took Sudorificks, and purged frequently.

2. Observat. of a strumous Swelling on the Ankle.

A Child about eight years of age was brought to me with a pituitous Swelling in his right Ankle and Foot. His Parents supposed it caused by some distension of that Joynt, and had applied anodyne relaxing Medicaments. But upon observing the bones of the Ankle to be preternaturally big, I concluded the original of the Disease in them, and that the Swelling in the Parts about proceeded from the dilatation of the Membranes and Ligaments of that Joynt. I declared the Cure to be a work of time: we not having yet discovered any Medicaments of force to dry up that Humour in the Bone, and restore it to its former smallness. That which was offered by me was, to discuss and dry up the serous Humours affecting the softer Parts, by Bandage to compress them, and resist the Influx, and the while to evacuate and contemperate the serous Humours. This being accepted of, I began with the fomenting it with *decoct. summitat. absinth. majoranæ, Jacobææ, flor. hyperici, salviæ, ros. rub. balanst. bacc. myrtil. &c.* in Wine and Water, with the addition of *spir. vini.* I then applied an *empl. è bolo* with a laced Sock over it, advising that Leg to be laid level with the Body till the Fluxion should be remitted, and the Joynt strengthened. During which the Patient was purged weekly with *Calomel. in conf. ros. damasc.* adding sometimes a few grains *resinæ jalapii,* or *diagrid.* and the intermitting days he drank *decoct. sarsæ, &c.* and took those mornings *Bezoard. mineral. cum syr. è cort. citri.* Thus at length the Humours were contempered, and the Joynt strengthened; and as the Patient grew more in years, the other Ankle increased proportionably to it, and lessened the deformity.

3. Observat. of a strumous Tumour by Congestion.

I could give you many instances of these Tumours; but the Cure not differing from what hath been said of this, I thought it unnecessary. What the consequences of these Tumours are when such method is neglected, you may see in some of the latter Observations.

An Infant scarce a year old, in the undressing of it, was discovered to have a round soft white Swelling on the head of the Shoulder. It was thought overstrained by the Nurse. A Physician was consulted, then a Bone-setter, who declared it luxated, and pretended he had set it: but his frequent coming to dress it, and the remaining Tumour, shewed that he understood not what he did. I was fetched, and opened it by Incision, giving vent first to an albugineous, then to a white concocted Matter; upon which the Tumour sunk. I fomented it with Red Wine, and dressed it with a Digestive *ex terebinth. cum vitell. ovi,* with *empl. diachalcit.* Compress and Bandage, and afterwards deterged it with an addition of *mel ros.* then left off the use of Tents, and in few days cured it with *unguentum diapompholyg.* This Infant was afterwards

wards diseased 5 or 6 years with the *Kings-Evil* affecting other Parts.

Such an other like Tumour did rise in the top of the Shoulder of a little Infant, the only Daughter of its Parents. At the Nurse's first discovery of it, she ran with it to the Bone-setters. They all concluded it out of Joint, and every one pretended he had set it. But the Swelling continuing, I was fetched, and, opening it by Incision, discharged such a like Matter as in the former Observation, and cured it as soon, after the same manner as abovesaid. This Child was afterwards afflicted with a very large Tumour lying deep under the Muscles on the inside of one of its Thighs. After divers Applications to resolve it, it at last came to Suppuration, and discharged an impure Matter; but was deterged and cured by the ordinary method set down in Putrid Ulcers, without any seeming defect in the Member. But some months after, the Infant using its Legs, this appeared much shorter than the other, yet without any manner of contraction or stiffness of the Member. I designed an Instrument for distending of it; but the Child being extremely forward, I declined it. After she was grown of more years, I was consulted again: but it was then too late.

4. Observation of the like; and of a strumous Tumour in the Thigh.

One about 19 years of age, of a seeming healthful Constitution, was suddenly seized with a white Swelling in his right Elbow, rendring the Joynt immovable. Though he could not remember any particular action of his that should dislocate it, yet he was perswaded to consult the Bone-setters. They all concluded it out, and endeavoured to reduce it; thereby halting an Apostemation amongst the Ligaments and Tendons, which discharged its Matter through many Orifices on the inner and outer side of the Joynt, making part of the Bone carious. Some of the declining Orifices I laid open, and deterged them; during which he was purged, and prescribed Antistrumatics. Injections were cast in of that sort proposed in Sinuous Ulcers with *Caries*, also discutient and corroborative Fomentations were applied. By all which at length the Tumour resolved, the Ulcers cured, and by frequent Embrocations he recovered a tolerable use of that Joynt.

5. Observation of an Abscess on the Elbow.

A Child of about 3 years old, healthful from its Cradle, was on a sudden taken lame in its right Hip. The Lameness increasing, he was brought to me. I compared the Hips, and found that swelled, and the Leg beginning to emaciate. I embrocated the Tumour *cum ol. ros. & aceto*, applying *emplast. è bolo*, and his Leg *cum ol. lumbricor.* I prescribed him a medicated small Ale with *Sarsa*, &c. and purged him once a week with Rhubarb infused in some of the said Drink, giving him the night before a few grains of *Merc. dulcis*, and the intermitting days *Bezoard. mineral.* By this method he was relieved; yet afterwards upon the omitting it he relapsed, but at length recovered. Others of this kind I have had under my care: but partly by reason of the progress the Disease had made before, and partly through the Impatience of the Parents, the Cure hath failed.

6. Observation of an Abscess on the Hip.

A Youth of about 12 years of age was seized with a pain in his right Hip. It increasing with Tumefaction and great Lameness, the Parents, suspecting it might be out of Joynt, sent for *Thurland* the Bone-setter. He declared it luxated, and pretended to set it, and dressed it up his way. The Child continuing lame, they sent for him again. He assured them he had set it, and that in time the Child would recover strength in it, and be well. But the Child growing daily more pained, Chirurgeons were consulted, and at last my self. I saw the head of the *Os femoris* shot upward, and a large Tumour possessing the Hip and Parts about, under which there seemed to be lodged Matter. There was also a long white Swelling stretching down the forepart of the Thigh, from the Groin towards the Knee, within 4 fingers breadth of it. The Tumour seemed

7. Observation of the like.

seemed to be full of Matter, and to drive it self from the Hip, and that the Luxation had been made by Fluxion, and increased by the Extension. But however it was, the Bone was not capable of Reduction, nor could I promise my self any credit from my endeavours there; yet I complied with his Parents resolving to serve them as well as I could; but desired that the Bone-setter might be first fetched to see his work: I not thinking it safe to meddle in the Cure, whilst he insisted that the Bone was reduced. They sent often for him, but he did not come, till I accidentally met him at a Person of Honour's Lodging, and by threatening brought him with me to the Child; where he acknowledged his fault, and declared the Bone incapable of reduction. Yet this fellow went directly back to that Person of Honour, and upon demand where he had been, declared that he had been with me, to set my Patient's Hip, and that he had reduced it.

This Fellow's scurvy using me almost discouraged me in the undertaking: but after making a presentation of it, I attempted the Cure, and began with discutient Fomentations, Embrocations, and Emplasters according to the method of Cure, till I had discussed part of the External Tumour, and satisfied my self that there was Matter lying deeper under the Muscles of that Joynt. Then, to prevent farther corruption of those parts, I applied three several Causticks on them at one time: after which I devided the Escars, and penetrated deeper into them with a Caustick stone, and by Incision gave vent to the Matter (which was partly albuginous) in the several Parts; then fomented them, and dressed them up with Lenients, to hasten separation of the Escars. The next day I applied a Caustick upon the declining part of the Abscess on the fore-part of the Thigh, and discharged much purulent Matter. By the opening this at first, I might have discharged the Matter above: but that being the Part immediately affected, it was not probable to cure it thereby, and afterwards the Opening would have been more difficult. And indeed, though by one single apertion on the Hip the Matter might have been let out; yet such a large Abscess would not have cured so: and afterwards to have cut through so many Muscles, must needs have been hazardous. But their lying thus triangular served to good purpose not only in discharging the Matter, but for conveniency of detarging; which after separation of the Escars I did with *mundif. Paracelsi* and *Merc. precipitat.* and kept those Orifices so open, that I could pass my Probe out of one into the other till they were deterged, and the Matter little in quantity and good. During which, the Matter in the other Abscess discharging daily in great quantity, and being of so virulent a quality as to retain its Cavities, and render the Lips phagedænous, I snipt the Abscess more open according to its length, and deterged it as the former, then purged him with *resina jalapii*, *Calomel*, &c. and gave him the intermitting days *Bezoard. miner.* His constant Drink was a medicated Ale with *sarsa*, *lign. lentisc.* &c. with *millepedes.* By this method the Humours were digested, and the several Ulcers incarned and cicatrized by the common method of Cure. During which his Leg was kept straight; and time hath since made the place callous which received the head of the Bone, so that he walks tolerably well on that Leg.

8 Obser-
vat. of an
Abscess on
the Hip.

A Youth of about 9 years of age was taken lame with a pain in his left Hip. Bone-setters were advised with, also Physicians and Chirurgeons were consulted, and many Applications made; he was likewise carried to the Bath: yet notwithstanding all their Endeavours, the pain increased with great Tumefaction. I was at last consulted, and felt the head of the *Os femoris* luxated and raised upward, with a great Tumour about it, which I judged by its fluctuation to be full of Matter. It was expected I should open it, and give vent to the
same:

same: but this Child being emaciated and Hectick, and the Matter lying deep, as in all these Strumous Abscesses it doth, the Solution beginning in or near the Joint, I declin'd the present opening of it, and propos'd the drying up of that matter by powerful Exsiccants and Discutients, viz. *aq. calcis*, and *empl. diasulph.* with convenient Bandage. During which the Physician prescribed lenient Purgatives, with *Calomel. decoct. sarsæ, Bezoard. min.* &c. by which method the Patient was more easie, and seem'd relieved for a while. But the Tumour increasing upon the least neglect in rowling; and appearing by its fluctuation to be full of Matter, I complied with their desire, and opened it by a large Caustick, giving vent to an albuginous Matter. I made search, and felt the Bone bare. I hastned separation of the Escar; and afterwards feeling the Skin thinner in the declining part of the Tumour, and judging that convenienter for discharge of the Matter, I opened that part by Caustick. Having now made way for the Matter, I cast in an injection of *decoct. rad. irid. aristoloch.* &c. with a Solution of *unguent. fuscum*. After separation of the Escar, I enlarged the Orifice towards the old one, and saw the *Epiphysis* of the *Os femoris* lying out of its *Acetabulum*, and black with its Rottenness. I dress'd it with Dossils dipt in *spir. vini*, and kept the Ulcer dilated, expecting what Nature would do: but in the while the Child languish'd, and died tabid.

A Girl about 9 years of age, born of a diseased Mother, having been some months lame of a Swelling on the Hip, was brought to me. It seem'd to me that the head of the *Os femoris* was luxated by a defluxion of sharp Matter, and that there was small hope of Cure. I applied *empl. diasulph.* with a laced Trowze, and prescribed Antistrumatics. In progress of time the Tumour increasing, they brought her again to me. When I had considered the original of it, and that if there were Matter in it, it lay too deep to be reached with a Caustick, I propos'd the application of a pointed actual Caustery about the head of the Joint, hoping I might that way at least give timely vent to the Humour, and prevent the corruption of the Ligaments and Bones. To which purpose I applied three small Causticks triangular about the most tumefied part of the Joynt, and the next day pass'd in an actual Caustery through each Escar, dress'd them up with Lenients, and fomented the diseased Part daily with an Infusion of Discutients in *aq. calcis* and *empl. opodel F.W.* over all. As the Escars cast off, a thin *Sanies* discharged, and the Tumour seemingly discuss'd: but then on a sudden it swelled; which put me upon the use of a maturative Cataplasim, by which it suppurated, and discharged its Matter through the former Apertions. But afterwards observing these Openings would grow too little, I pass'd in a small Probe with a Ligature into one of these, brought it out at one of the other, and kept them open by that Seton, then proceeded again with Discutients and Internals. Some months afterwards these two Openings were laid into one, and the Orifice kept dilated with Dossils spread with Deterfives, and the Abscess was again restored to a healing condition. But after all my Endeavours, new Apostemations arose, and the Child died tabid.

9 Observat. of an Abscess on the Hip.

A Young man of about 18 years of age, being lame of his left Knee, sent for a Bone-setter, who declared the Bone luxated, and would have extended it. The next day I was sent for, and saw a Protuberance on the inside of the Bone, a pituitous Swelling on each side of the *Rotula*, and a painful Swelling on the other Parts about the Knee. These, with the Protuberance of the Bone, made the Joint seem somewhat luxated at first sight: but upon farther search, that Prominence was in the Bone it self, and is usual in Strumous Tumours of the Knees, Ancles, &c. and hath been taken notice of by *Aquapend.* under the

10 Observat. of a Protuberance in the Bone of the Knee.

the name of *Spina ventosa*. I have taken notice of it in several places of this Treatise, and shall have occasion to speak of it again in some of the following Observations.

I concluded this Disease to have been originally in the Bone; and, upon farther enquiry, did discover that the Patient had been diseased of that Knee from his Childhood more or less. I directed an *empl. è bolo* to be applied on the Knee, to calm the heat in the Part, then let him bleed, and afterwards purged him. The next day after I caused his Knee to be fomented with Decutients and Exsiccants infused in *aq. calcis* some days, and afterwards applied *empl. diasulph.* with a Knee-piece, and disposed him to walk with more ease. About a year after he came to me again complaining of it, and will be subject to pain in it at times whilst he lives. This was the case of a person Dr. Walter Needham and my self were lately consulted about: and such are frequently seen at our publick Healings, they being generally accompanied with other marks of the *Kings-Evil*.

11. Obser-
var. of a
Tumour
on the in-
side of the
Knee.

A person of about 9 years of age, of a tender Constitution, subject to a Cough and other effects from an acidity in her Blood, was afterwards discovered to be lame of her right Knee, supposed to happen by some accident of a Fall. I being sent for saw the Bone on the inside protuberant, and covered with a white Swelling. It was possible that such an accident of a Fall might contribute to the hastning of that Swelling: but it was certain that the Protuberance of the Bone was of a longer growth. She had a Species of an *Oxana*, as also a *Struma* ulcerated in her left Arm. I did suspect this Tumour would prove difficult of Cure, and therefore did desire they would consult their Physician. In the mean time I applied an *empl. è bolo*. The third day after I met Dr. Micklethwait. The Tumour was then spreading over all that side of the Knee. It was resolved by us to endeavour Discussion, by the application of *empl. diasulphuris*: which was accordingly done. The Physician prescribed as followeth. *R. sarsaparilla incis. ʒij. Chinae nodosa ʒi. saffrafas ʒiij. rad. scorzon. Hispan. ʒβ. ras. eboris, corn cervi, an. ʒiij. creta purissima, bol. armen. an. ʒij. coq. in aq. font. ad ʒiij. sub finem adde sem. anisi ʒiij. glycyrrhizæ ʒβ. war. passul. ʒiij. fiat Colatura; bibat quantum poterit. R. Merc. dulc, gr. x. conf. ros. damasc. ʒij. Misc. fiat Bolus hora somni sumend. 5. quaque nocte. R. milleped. præp. gr. x. antimon. diaphoret. gr. vj. Misc.* This latter she took twice aday, with a draught of her Diet drink after it: those days she intermitted, the Purgative. 4 or 5 days after we met again; and seeing the Tumour increased, and feeling the Matter fluctuate in it, we concluded it necessary to open it; and to that purpose applied a Caustick on the declining part. We divided the Escar, and discharged about 3 spoonfuls of a thin white Matter; then dressed it up with Lenients, and *empl. diachyl.* The Matter discharged between Dressings very well, yet the Tumour did not lessen: but upon pressure with my hand above near the Thigh, The Matter gushed out. Upon which consideration we applied a Caustick there. It did not reach it: but upon keeping that part open as a Fontanel with a Pea, the Matter made its way out there, but in the mean while it insinuated it self below the first Apertion; which put me upon the laying that Orifice open lower. Having thus made convenient discharge of the Matter, I applied Intercipients above about the Thigh, and endeavoured by Digestives and Deterfives with Compress and Bandage to dispose the Ulcers to cure. But the Matter originally rising amongst the Membranes and Tendons, lay deep, and affected the Joynt with great virulency, corroding the very Lips of the Ulcer. Upon which consideration I would gladly have laid it open from one Orifice to the other: but the weak condition of the Patient obliged me to cherish the native heat of the Part by Fomentations *ex*

sum-

summit. absinth. hyperici, flor. rorismarin. beton. salvia, ros. rub. balanst. bacc. myrt. juniper. &c. in vino rub. and to alleviate the pain in the Ulcers, till the Habit of Body should be better disposed by those internal Prescriptions, to which were added Emulsions, with *aq. calcis*; medicated Broths, Asses-milk, Jellies; what not? The Summer coming on, she was bathed in Milk and Water luke-warm, and by cordial Juleps her Spirits were kept up. By these various Prescriptions the Fermentation in the Humours was calmed, and her Hectical Heat remitted, also the Defluxion upon the Ulcer diminished, and the *Sinus* was in a condition to be laid open. I designed to have done it by one snip of a Probe-scissors: but it being suspected she might thereupon faint or fall into Convulsions, I laid it open by Caustick; and from that time it digested, incarned and cicatrized. I met with many rubs in the work, it frequently fretting out in one part as it healed in another; and after a year and a halfs attendance, I left a small Ulceration on the upper part of the Knee, of the breadth of a Silver-Half-peny, and a sinuous Ulcer in the hollow of the Thigh near the Knee, which was not capable of being laid open. In that I order'd a hollow short Tent of Lead, whereby it was kept open, and the Matter was seemingly discharged, it scarce at all mattering. Her Leg was all this while kept outstretched, whereby she was able to stand or walk. In this condition she removed to drink the Waters at *Scarborough*, and returned afterwards so well, that they were thought to have cured her: yet she hath been since frequently subject to Eruptions, but her Attendant is her Chirurgion.

A Child of about eight years of age was brought to me in the year of the great Plague during my being in the Country. He had one white Swelling on the right side of the *Rotula*, another beneath it. There had been one on the left side, but it had been formerly opened at *London*, and left sinuous. I began with the laying it more open by Incision; and having deterged and disposed it to cicatrize by the common method of curing Ulcers, I opened the other beneath the *Rotula*, and gave vent to an albugineous Matter, then laid it open the whole length, and dressed it with Dossils spread with *mundif. Paracelsi*. This being deterged, and disposed to incarn, I then opened the third, and discharged the same kind of Matter. I deterged it as the former, and by the addition of *pulv. myrrhæ, sarcocoll. &c.* incarned it. I cicatrized the second with *unguent. e calce*, and having disposed this to do so, I left him to his Chirurgion, who cicatrized it. During the cure of the Ulcers the Ham was daily embrocated with *unguent. dialthæ, ol. lumbricor. &c.* and was brought out streight, and left flexible by me. Soon after he recovered strength of it, and walketh now well on that Leg.

Another about 7 years of age was brought out of the Country to me, and lodged near me in *Covent-Garden*. He had been two years exceedingly lame of his left Knee by reason of the like Swellings about the *Rotula*; his Ham was also retracted, and his Leg emaciated. I began with the stuping them with *aq. calcis* wherein had been infused *summitat. hyperici, hyssopi, majoranæ, flor. sambuci, chamæm. ros. rub. bacc. myrt. juniper, &c.* and applied, *emp. diasulphuris, &c.* But the Swellings not diminishing thereby, I opened that beneath the *Rotula* first, and the rest afterwards. That on the outside of the *Rotula* was an *Atheroma*, and grew sinuous; and upon search I felt the Cartilage bare. I laid it open the whole length, kept it so with Dossils dipt in *spir. vini* and *syr. de ros. siccis*, and attended the Exfoliation. During which the Patient was purged with *Calomel.* and *diagrid.* once a week, and on the intermitting days drank a *decoct. farse, &c. Bexoard. mineral. &c.* were also prescribed. Emollient Embrocations were made to the Ham, and a laced Knee-piece put on to make Compression, and dispose the Lips of the Ulcers to cicatrize: by

12. Observat. of a Tumour on the Knee.

13. Observat. of the like.

which two of the Ulcers soon cured, and some while after the other incarned and healed to the very Cartilage. I kept it dilated with a Dossil, and thereby the Matter lessened daily, and that Ulcer cured (by leaving out the Dossil) without any visible Exfoliation. The Ham was much relaxed: but there being some contraction remaining, I fitted him with an Instrument which by virtue of its Screws, gradually extended the Joint, and dismissed him with satisfaction to his Parents.

14. Observat. of a Tumour on the right Knee.

A Child of about six years of age was brought to me with sore Eyes, and a white oval Swelling on the inside of her right Knee. I applied a Caustick on it, and the next day opened it. It lay deeper than the Caustick had reached; and the Incision appearing too small for the emptying of it, I laid it more open with a snip of my Probe-scissors, and discharged a Cheesie Matter. I then dressed it up with Digestives, and the fourth day took off Dressings, and saw part of the *Cysts* come away with my Dossils. I dressed it with *mundif. Paracelsi*, and having thereby deterged it, I added Sarcoticks to the Mundificative, and commended the prosecution of the Cure to their neighbouring Chirurgion, with direction to proceed with Internals to evacuate and temperate the acid Humours. Many Instances of this kind I could present you: but they not differing in the manner of Cure, I shall forbear, and give you one Instance of the sad Consequences of these Tumours.

15. Observat. of Tumours on the right Knee.

A Young man, 19 years of age, had been lame from his Childhood with several of the aforesaid Swellings about the *Rotula* of his left Knee; with a retraction of the Ham: he had also Glands swelled in *Inguine*, &c. at length a Defluxion seized upon the uppermost Tumour of the Knee, and increased it and the rest with great Pain. A frequent Vomiting and *Diarrhea* accompanied it, and sometimes a Cough. I being consulted endeavoured to resist the several Accidents by Pectorals, Opiats, Cordials, &c. and began the Chirurgery by the application of a Caustick on the Tumour above the Knee, by which I gave a great discharge to a purulent Matter; then dressed it up with Lenients, hoping to intercept the Matter in its descent downwards: but before that Escar separated, the Matter made its way down to the external parts of the Knee; which put me upon the necessity of opening it there, and afterwards on the inside of the Knee, and in two several places of the Joint it self. In some of which I felt the Cartilages and Bones corrupted; to which I applied an actual Cautery, and afterwards kept them open by a Paste made of *Pulv. rad. aristoloch. rot. panacis*, &c. Having thus given evacuation to the Matter by the several Apercutions, I fomented the parts with Stupes wrung out of a discutient and corroborative Decoction, and applied Cataplasms *ex far. fabar. bordei, lentium flor. ros. rubr. balauft.* &c. decocted in some of the forementioned *Fotus*, with the addition of *oxymel. scillitic.* &c. then by the application of *mundif. Paracelsi*, *Præcipitate* and the *Vitriol-stone*, I deterged and disposed the Ulcers to a better condition, that on the upper part of the Knee healing up. But the while I attended the Exfoliation of the Bones, the *Caries* increased, and the Patient languishing died at last tabid.

16. Observat. of a strumous Ulcer on the Ankle.

A Child of about six years of age was brought to me extremely emaciated. He had a strumous Ulcer on the outside of his Ankle, with a *Caries* on the end of the *Fibula*: he had also three of the Spondyls of his Back distorted. I laid the Ulcer open by Caustick, and afterwards deterged it, and dressed the Bone with Dossils of Lint dipt in *spir. vini*; over which I applied Epuloticks, with Compress and Bandage. His distorted Spine, being somewhat inflamed, I embrocated *cum oleo myrtill. & aceto*, and applied an *empl. è bolo*, with a soft Compress and Bracer. During which Dr. Bate and the deceased Dr. Stanley were consulted, and prescribed him as followeth: R *Merc. dulc. gr. xv.*

resina

resina jalapii gr. viij. bezoard. min. gr. iiij. cum succo gran. chermes fiat Bolus, capiat hora somni, & mane ziiij. syrup. de cichoreo cum rhab. in ziiij. aq. germ. querc. iteretur quarto quoque die. R sarsaparilla incis. & contus. ziiij. ligni lentisc. ziiij. rad. Chinae ziiij. ras. eboris ziiij. milleped. contus. num. 1000. uvar. passular. enucleat. 3x. radic. rusci ziiij. Misc. pro saccula pro tribus cong. Ala tenuis non lupulat. bibat pro potu ordinario. R aq. calcis lbj. sarsaparill. ziiij. rhab. Chinae ziiij. uvar. passular. enucleat. ziiij. glycyrrhizæ 3vj. fiat Infusio. R hujus infusionis ziiij. rad. eryngii conditi 3vj. sem. molon. ziiij. fiat Emulsio S A. dulcoranda sacchar. tabellat. perlati, sumat ziiij. mane & vesperi. After the removal of the Defluxion upon the Spine, I applied an empl. ad herniam with Bandage as before. Whilst I attended the Exfoliation of the Bone by the application of Lint pressed out of spir. vini, I healed the Ulcer in the Parts about to the very Bone, and as that moulder'd off, the Ulcer incarned and cicatrized, and the Child perfectly recovered within the space of two Months, continuing straight and well to this day.

One about 13 years of age, grievously diseased with the *King's-Evil*, was commended to my care. He had a *Struma* on the right side of his Neck moveable, and of a round figure: he had also a *Struma* ulcerated in each Arm; the one on the inside near the Elbow-joynt, and the other on the outside of the *Biceps*. His right Hand was ulcerated near the Bone leading on the first Joynt of the Thumb, and passed its Matter close by the Bone to the inside, corrupting the Bone. One of his Ancles was much swelled and ulcerated on the inside in several places, which Ulcers upon search with a Probe appeared to have communication with one another, and served for the discharge of an Abscess lying in the Joynt, with corruption of the Bone. He had also in the Groin of the same side a Cluster of *Strumæ*; which I suppose were occasioned by the anguish in the Ankle. Sir Alex. Frazer and Sir Fran. Prujean were his Physicians, and prescribed him medicated Broths, traumattick Decoctions, with other Specificks proper in his weak condition. I began my work with the laying open those Ulcers in his Hand and Ankle by Caustick, and proceeded by Detersives to consume the *Hypersarcofisis*, and make way to the Bones, accordingly as hath been shewed in the Treatise of Ulcers. After I had made way to them, I dressed them with Dossils prest out of spir. vini, keeping those Ulcers dilated. During which I endeavoured to digest the ulcerated Parts about, and cicatrize them to the carious Bones, likewise to cherish the native Heat in the Members, and defend them from Fluxion by good discutient and corroborative Fomentations and Bandage. By this means the Matter daily lessened, and the Patient recruited his strength. I attempted the Exfoliation of these Bones some days, by dressing them with a Solution of unguent. *Ægyptiac. spir. vini, pulv. myrrhæ, euphorb. &c.* upon Dossils hot; and it succeeded well to that *Caries* on the Hand. But the Corruption was too great in the Ankle-joynt to yield to the Medicament; wherefore having healed that Ulcer to the *Caries*, I applied an actual Cautery through a *Cannula*. At the first application, pressing upon the *Caries*, the Matter spurted out upon us. I pull'd out the Cautery and *Cannula*, and dried the Ulcer with armed Probes, repeating the use of the Cautery till I had consumed the *Caries*; then dressed it up with Lenients, to appease the heat. After two or three days I dressed the Bone with Dossils pressed out of spir. vini, and the Lips of the Ulcer with unguent. alb. camph. and attended the Exfoliation. During which I laid open those Ulcers in his Arms by Caustick, eradicated the *Strumæ* with Merc. præcipitat. and cicatrized them. I also cut the *Struma* out under his Jaw, and soon cicatrized it. The Ulcer on the Bone leading to the Thumb, was a painful work, the Tendon lying over the *Caries*; which put me at last upon the laying open the Ulcer on the inside,

and applying my Medicaments that way, by which I exfoliated the Bone more easily, and cured the former Opening the while, and this soon after. The *Caries* in the Ankle was slower in Exfoliation, and did not cast off its Shell till I touched it with *ol. vitrioli* : after which it soon exfoliated, and the Ulcer cured. The Tumour in *Inguine* was embrocated with *valentia digitalis* during the Cure, but did not resolve till afterwards. The Cure of this person was the work of a year, and was so doubtful for some time, that it was difficult to determine which should be dismember'd first, Hand or Foot. But he happily enjoys the use of both, with a perfect good health, to this day.

18. Observation of a *Struma* on the right Foot.

A weak sickly Child, about 10 years of age, was commended to my care by Dr. Mapletost, She had a *Struma* suppurated on the right Foot amongst the Tendons and Bones leading to the two lesser Toes : I suspected them corrupted. But there being a necessity of opening it, I applied a Caustick proportionably, and gave vent to an Albugineous Matter, and felt those Bones bare from the *Tarsus* to the first Joynt of the Toes. I fomented the Part affected with a discutient Decoction, and dressed the Escar with Lenients, to hasten separation of the Slough : and as it began to separate, I deterged with *Merc. præcipitat.* and the Vitriol-stone, making way through the luxurious Flesh to the *Caries*. Then with Dossils dipt in *mel. ros.* and *spir. vini*, and prest out, I dressed the Bones, and kept the Ulcer so dilated, as to see the Bones so far as they were carious. But in the applying my Dossils, they pressing upon the Tendons, render the Ulcer painful, and subject to great Defluxion of a thin serous Matter, and threatned worse mischief. To remedy which, I cut off those Tendons, dressed up the Ulcer with Digestives, and applied Refrigerants externally to restrain the Fluxion. At the next dressing, finding the Tendons contracted, and the Bones more easie to come at, and seeing the Exfoliation of them by Medicaments like to be a tedious work, the Matter having made its way under them, threatening Apostemations in the Sole of the Foot, I resolved to attempt them by actual Caustery. To which purpose I dressed them with Dossils of Lint, to dilate them more for my view ; and the next day I burnt them the whole length ; then with my *Forceps* pinched them to pieces, and pull'd those broken bits out ; after which I cleansed the Ulcer, and applied my Dossils pressed out of a mucilaginous Decoction between and over the ends of the remaining Bones, dressing up the Ulcer with Digestives, and applying externally Compresses dipt in *aceto* wherein had been infused *sal. nitri*, *myrrh.* &c. over which a laced Sock was put on. Thus I restrained the Influx, and pressed forth the Matter from its several Cavities. Yet I was necessitated to make afterwards an Apertion through the Sole of the Foot, and to lay open the Ulcer beneath the Ankle, for the readier discharge of matter. I continued the application of Dossils pressed out of *spir. vini* to the ends of the Bones, till a *Callus* thrust forth, fill'd up the void space, and supplied the want of the Bones. During this work, the Patient was afflicted either with a Cough, *Diarrhæa*, or Vomiting : in all which cases Dr. Mapletost assisted with various Prescriptions, and contempered the acid quality of her Blood : after which by good Nourishment the Child recovered her Strength. She being thus at length disposed to a fair way of Recovery, the Ulcer near cicatrized to the Bones, and there being nothing more to do but to keep it open with dry Dossils and a Pledgit of *diapompholyg.* with the usual Bandage, I by degrees left it to her Mother to dress, and saw the Child afterwards upon her Feet ; and at length she recovered. And thus Time may be said to contribute much to the Cure of this Disease : But without the Chirurgeon's careful attendance, they miserably languish and die. For Amputation in this disease signifies little, the Ulcers rising with *Caries* in one Part while you are extinguishing them in another.

A Gentle-

A Gentleman sent two of his Sons out of Ireland to Westminster School: they seemed both healthful Youths, but soon after the elder of them grew indisposed with a Cough, and died tabid. His Body being opened by his Physician, his Lungs were discovered full of *Strumæ*. The other, a Youth about 12 years of age, had the while a Sore burst forth of his Thigh, and had been dressed by a neighbouring Apothecary. His Brother being dead of the *King's-Evil*, the Relations enquired into the cause of this Youth's Lameness, and discovering several white Swellings about him, brought him to me. That Ulcer which the Apothecary dressed was strumous. He had one *Struma in Perineo*, another large one upon his right Thigh, and two upon that Leg. On his left Leg there was one upon the head of the *Fibula* near his Knee, another upon the Calf of that Leg, a very large one lying on the out-side of that Ankle, one lying upon the middle Toe of the same Foot, and two upon his right Arm. These were all suppurated, and there was great suspicion that the Bone was carious in those of his Ankle and Toe. In order to the Cure, they required all to be laid open. But how the Patient could bear so great an evacuation at once, I much doubted: and to open them one after another, would be a slow way of proceeding, and subject to many inconveniences. I concluded it best to lay them all open at one time, while he was in heart, and had strength to bear it. To which purpose I caused a quantity of soft Caustick to be made, and the next day applied it proportionably large upon every one, so as to take off all their Covertures, and dispose them to a healing condition. For a simple Opening in these Tumours signifies nothing, but to render them so many sinuous Ulcers. The Escars being made, I divided them, and gave vent to the Matter in the several Tumours, then dressed them with Lenients to hasten Digestion. During which Dr. Tho. Cox was consulted, who directed this following Course of Physick. *R. tamarind. cassiæ recent. extract. an. ʒj. fol. senæ ʒvj. Rhei ʒij. sem. coriand. preparat. ʒj. macis ʒʒ. infund. & ebulliant in s. q. aq. pomor. addenselo vini albi & succi pomor. an. ʒij. Colaturæ ʒij. adde syr. violar. & mannæ an. ʒʒ. clarificetur ovi albumine, & fiat Apozema pro tribus dosibus alternis auro- ris sumendis. R. sarsaparillæ ʒvj. Chinæ ʒiv. ligni lentisc. ʒiij. sassafras. ʒij. ligni guaiaci, eboris, corn. cervi, an. ʒiʒ. passul. enucleat. ʒij. cort. Winteranæ, flaved. aurantiorum, citr. nuc. moschat. an. ʒij. incidend. incidantur & contund. contun- dantur, & adde fol. cochlear. marin. ad biduum siccant. Mvj. salviæ Mij. anthos Mj. milleped. ʒij. furfuris frumentac. Mj. frust. chalybis recent. num. iij. fiat Sacculus suspend. in con. vj. cerevisiæ dimid. part. lupulat. & si pro potu ordinario, R. ligni sassafras ʒij. infund. in aquæ font. ʒxvj. dein adde eboris & corn. cervi an. ʒvj. fol. agrimon. cochlear. marin. beccabung. nasturtii aquatici, an. Mvj. cochlear. bortenf. berber. an. Miiij. passular. enucleat. ʒij. cort. Winteran. cinnamomi, an. ʒij. vini albi ʒiij. lactis recentis ʒvj. distillantur organis commun. capiat. aq. di- stillatæ ʒvj. extra pastum ter in die, dulcoretur syrupo nostro balsamic. After the separation of the Escars I rubb'd the *Hypersarcoses* with the Vitriol-stone, and dressed them with unguent. basilic. and Merc. præcipitat. I cut off the thin Skin which covered the old Ulcer, dressing it after the same manner, and after- wards cicatrized them all, except those upon the Ankle and Toe, with the common Epuloticks, in less than two Months. But those being carious were a longer work, the Matter there rising from within the Bones: they were also full of loose Flesh, and that of the Ankle sinuous and accompanied with Fluxion. The end of the *Fibula* being likewise corrupted by the same Mat- ter, I deterged it with the Vitriol-stone and Præcipitate, dilated it to the Bone with Gentian-roots, and fomented the diseased Part with a Decoction of *absinth. centaur. hyperici, flor. ros. rub. balaust. bacc. myrtill. &c.* in Wine and Water; then dressed the Ulcer with Digestives, and hastened the cicatri-*

19 Obser-
vat. of a
Struma on
the Thigh,
and sever-
al other
Tumours.

cicatrizing of it to the *Sinus* penetrating to the Bone. While that was cicatrizing, I kept the Bone bare with Dossils pressed out of *spir. vini*, and dressed the Bone of the Toe after the same manner, till the Ulcer about it was digested and ready to cicatrize to it. Then I consumed and dried the *Caries* in the Bones of the Ankle and Toe with actual Cauteries, penetrating very deep into that of the Ankle; and repeated this way again and again, till I had wasted the humidity in each part of it: then dressed them with Dossils of Lint pressed out of Red Wine, and the Parts about with Refrigerants. After I had thus calmed the heat in the Ulcers, I kept the Bones dry and bare by the application of Dossils in *spir. vini*, and attended their Exfoliation. But in the mean while a *Spina ventosa* arose in one of his Hands, and the next Toe to the diseased one began to swell. Upon sight whereof Dr. Cox was consulted, and prescribed *Calomel.* and other Specificks. The Swelling increasing in the Toe, I proposed the cutting off the other, supposing that to be the cause of it. The Patient appearing unwilling, I brought in Mr. *Hollyer*, who encouraged him; and about a fortnight after I prevailed, and cut it off, and some while after, cut off the other Toe, to save that Foot. I digested and cicatrized these Ulcers to the Bones, but could not make them exfoliate, till I had burnt the ends of them with an actual Cautery; and then they cast off but slowly. The Ulcer in the Ankle I cicatrized down to the Bone, that it lay dry; yet did that Bone make no haste away. During my attendance on these, a Swelling arose on the outside of one of his Arms near the Elbow. He concealed that from me till it was grown very large, and ready to burst. There also arose in one night a *Spina ventosa* on the Fore-finger of the same Hand where the other arose: upon which I applied an *empl. de ranis cum Mercurio dupl.* I laid open the *Struma* upon his Arm with a Caustick, and endeavoured Digestion in it by the method used in the Cure of the other *Struma*: but it grew corrosive, and resisted my Endeavours. I consulted Dr. Cox again; and considering the acidity in his Blood, and the approach of Winter, we thought it necessary to attempt somewhat extraordinary, to prevent farther mischief; and together concluded that he should be put into a light Salivation. Accordingly I attempted it with *Merc. dulcis.* But he having taken of that all along, it worked downwards; and he being weak, I durst not move it by Vomit. But by Suffumigation I raised it, and salivated him above 17 days: during which the Ulcer in his Arm cured, and the *Spina ventosa* on his Hand resolved. But that other in the Bone of his Fore-finger increased with great Inflammation and Tumour. In the declination of his spitting we purged him, and sweat him with a Decoction of *sarsa*, &c. Afterwards he drank his former prescribed medicated Ale, &c. recovered daily his strength, and grew fleshy; his Ulcers healed up, and the Bones cast off in the Ankle: so as there remained only a piece of the compass of a silver Two-pence, and that loosened and thrust off by virtue of a *Callus*, which cicatrizing with the Lips of the Ulcer, made a firm *Cicatrix*. Yet the *Spina ventosa* remained, and raised a small Apostemation on the inside of the Finger. I laid it open by Incision to the Bone, and saw it smooth and white. I penetrated into it with an actual Cautery, and dried it, then dressed it with Dossils pressed out of *spir. vini*, and digested, incarnated and cicatrized it to the Bone. Having thereby disposed it to Exfoliation, and concluding him as it were cured, I left him Directions to dress it, and others to judge of my work, I taking the while a Journey into the Countrey. At my return I received a Letter from his Mother, dated at *Bristol*, that the Bone was cast off, and his Finger cured. Since which time he hath enjoyed good health, and is grown a man.

20 Obser-
var. of a
Tumour
in the
Foot.

A Man aged 23 years, of a tolerable good Habit in body, was diseased with a white Swelling on the inside of his Foot beneath his Ankle down to the Heel.

Heel. There seeming to be Matter in the upper part of the Tumour. I laid it open by Caustick, and discharged an Atheromatous Matter in great quantity, then dressed it up with Lenients. At the next dressing, finding an increase of Matter, I made a search with my Probe, and felt a *Sinus* running to the Heel. I laid it open thither, and dress'd up the wounded Lips with a Digestive *ex terebinthina cum vitell. ovi*. After digestion of the Ulcer, I felt the lower part of the Heel-bone bare. I proceeded in the healing of the upper part of the Abscess, by laying the neather part open to the Bone, and dressing the Bone with Dossils of Lint to keep it dry and dilated to my view. I afterwards saw it bare the compass of a Groat: it appeared white and pory. I continued the method of Dressing; and after I had disposed the rest of the Ulcer to a healing condition, I consulted Dr. Denton, who had a kindness for the Patient. He met me at the poor Man's Lodging, and saw the Ulcer dressed, and those Inequalities with a *Caries* in the Bone. We applied an actual Caustery to it, and kept it dry with Dossils, according to custom, attending its Exfoliation; the Physician prescribing Internals, and taking care of his health. Thus all things succeeded well, as we thought: but some while after he was seized with a *Phrenitis*. He had no Fever, yet died some days after, notwithstanding all our Endeavours by Bleeding, Cupping, Blistering, &c.

A Child of about seven years of age having been diseased with a Swelling on the outside of her Heel the space of two Months, it apostemated, and discharged its Matter, terminating in a painful Ulcer. Her friends being informed it was the *King's-Evil*, recommended her to me, I saw her *Hectick*, and upon a search into the Ulcer felt the Bone carious, but had no order to dress her till about two Months after; and then I began with the laying open the Ulcer, and bringing the Bone into view. Which after I had done by Dilatation, I perceived it so loose that I could easily have taken it out whole: but it looking white, and seemingly sound, I perforated it with a *Terebra*, and felt the external part of it hard: though after I had pierced that, I felt the interior parts soft and rotten. I applied a Bolt-caustery into that Perforation, to dry up the humidity: but the Matter spurted out of it. When I saw it irrecoverably lost, I resolved to take it out: to which purpose I invited Sir Charles Scarburgh, who upon sight of it agreed to the pulling it out. I laid hold of it with my *Forceps*, and easily drew it forth, not a drop of blood following it: then dressed up the Ulcer with Sarcoticks, and put on a laced Sock, to bring the parts close and shape the Heel. Sir Charles prescribed Internals, and visited her often. I proceeded hopefully for a Month or two: but there had been formerly a cluster of *Strumæ* in that Groin, which had been raised by the anguish of the Ulcer in the Heel, that apostemated and discharging its Matter down the Thigh, terminate in a sinuous Ulcer, which exhausted her strength so that she died tabid.

21. Obser-
vat. of a
strumous
Tumour
on the
Heel.

A Child about 7 years of age was commended to me by Dr. Tho. Cox. She had some *Strumæ* in both her Arms, and one large one lying on the outside of the Calf of her Leg, stretching downwards towards the Ankle. She had another possessing the outside of that Heel. That on her Leg was suppurated: this of the Heel burst some weeks before she came out of the Country, and discharged its Matter by a small Opening. I began with the laying open these two by Caustick; out of the uppermost I discharged a serous and curdled Matter. After separation of the Escars, I deterged them with *Merc. præcipitat.* and the Vitriol-stone, much suspecting a *Caries* in the Heel. During which her Physician purged her with this: *R. julep. cathartici ʒiij. syr. de pomis magist. ʒss. aquæ cinnam. hord. ʒj. è flor. persic. ʒss. Misc. fiat Potio.* This following Decoction she drank those days she did not purge: *R. rad. China ʒx. sarsaparilla, ras.*

22. Obser-
vat. of
Strumæ on
the Arms,
Leg, and
Heel.

raf. cornu cervi, eboris, an. ʒss. infund. & ebull. in aq. font. ʒiv. debito tempore, add. radd. tormentilla, bistorta, an ʒj. millefol. summitatum caryophyll. mont. flor. hyperici, an. Mj. conf. ros. rub. ʒij. dactyl. exospat. num. vj. cinnam. confraʒ. ʒij. sem. coriand. preparati ʒjss. colatura ʒiij adde syr. de symphyto Fernelii ʒiij.
 To the Strume in her Arms I applied Celsus's Malagma, and disposed them to Resolution. The Ulcers in the Leg and Heel being deterged as aforesaid, they healed in few weeks: but the latter brake out again the third day, and confirmed me that it was carious. I went one morning whilst she was asleep, and applied my mildest Caustick on it; and after digestion of the Escar I made a search, and penetrated at least half an Inch deep into the Bone. I had before given suspicion to the Parents of the Caries, and it now appearing to have risen originally out of the middle of the Bone, I thought it necessary that they should consult some Chirurgeon in order to the Cure of it. Mr. Hollyer met the Physician and my self, and after search declared the Caries as I had represented it. He approved of the dilating the Ulcer, and dressing the Bone dry. Calomel. Bezoard. min. &c. were then resolved on and prescribed by the Physician. The next day I began with the dilating the Sinus with prepared Sponge, and having brought it to view, I dressed it daily with Dossils pressed out of *spir. vini*, and the while healed the Ulcer down to the Bone; by which the great discharge of Matter which frequently threatens a Hectick in other was prevented, and our work succeeded well. But this Child had a Grandmother in the Country, that out of abundance of kindness to the Child did much frustrate her Cure, not only by her frequent Letters, but also by a Woman she sent up, who pretended to Chirurgery, and seeing the Ulcer without Inflammation, swelling or considerable discharge of Matter, reported to her that it was an inconsiderable Sore, and would soon cure, if the Chirurgeon did not keep it open by thrusting Lint into it. Others both in City and Country informed the Grandmother, that the casting off of the Rottenness in the Bone was the work of Time, and that the Ulcer needed no such Dressings as I applied. Upon which she persisted in soliciting the Parents to bring the Child back to her in the Country. These things coming to my knowledge put me upon as great a desire to be freed of the Patient, and made me cautious in the dressing the Bone: for it did certainly require the actual Caution; but I dressed it only some days with an armed Probe dipt in a Solution of *unguent. Aegyptiac.* and *extract. scordii* scalding hot, and afterwards with Dossils dipt in a Composition of *ol. myrrha distillat.* &c. by which at length the Rottenness seemed to be cast off. I likewise complied with all their Inclinations, leaving out the Dossils, and permitting the Ulcer to time. At the first leaving out the Dossils the Ulcer contracted, and being callous, and dressed with a Pledgit of *unguent. tutia*, retained an Opening large enough to discharge its small quantity of Matter: which gave hopes of its being as it were cured. The laced Stocking with Compresses under it restrained the influx of Humour, and strengthened her Foot so that she walked tolerably well on it. But not long after her Blood fermented, and the Small-pox burst forth abundantly, threatening her Life. But she happily recovered out of them: yet from that time her Eyes began to be afflicted with sharp Defluxions, and the Humours fermented in one of the Glands in her Arm, which was seemingly before dissolved. This put me upon the opening it by Caustick, and proceeding in the Cure: which I did, and accordingly soon cured it. In order to the Cure of her Eyes, Fontanels were made. Leeches applied behind her Ears, blistering Plaisters to her Neck, Intercipients to her Temples, and Applications were made to her Eyes; lenient Purgatives and Alteratives were also repeated: by which she was relieved. But they being weakened by the Defluxion; were frequently subject

subject to it. Thus she returned with her Parents into the Country, supplied with Directions from hence. After her being there some time, her Heel apostemated, and I was consulted by Letter. But her Grandmother, listening to every Pratler, governed the Child accordingly, and I suppose it continues still diseased.

A Gentlewoman aged 16 years, of a seeming healthy Constitution, was seized with a pain in her Right Foot. Various Remedies were applied; a Bone-setter was also employed, but the pain increasing with Tumour, a Chirurgion was entertained; who, after several Applications, seeing somewhat like a Suppuration, opened it: but from that time it growing more sinuous, and the Swelling greatly increasing, he consulted others of his Profession, and afterward left her to be dressed by one and another. After she had languished near the space of a year and a half, I was consulted, and found her Foot lapt up in a Cataplasim. Upon the taking which off, I saw it extreme big, and all apostemated, discharging its Matter round, at the outside, inside, Sole of the Foot, and Heel, so that it was easie to pass a Probe through any way. The external Ulcer on the Foot was large, and over-grown with an *Hypersarcosis*: the Bones within the said Foot were most of them carious in one part or other; some of them were rotted to pieces. If this Patient had been tolerably strong of Body, Amputation had been of use: but she was emaciated, and frequently afflicted with a *Diarrhea*, Cough, and a great weakness and dejection of Appetite. Upon which considerations the Ulcers were superficially dressed with Pledgits of *unguent. Apostolor.* and the Patient perswaded that the Exfoliation of the Bones was the work of time. But it being visible, that Nature could do nothing in her case without the help of Chirurgery in drying up the luxurious Flesh and making way to pull out the rotten Bones, and dressing of the others which were less carious with Medicaments accordingly drying; I declined the meddling with it, unless I were permitted so to dress it. Not that I had any great hopes that way: but if that were not attempted, she would certainly die. At that instant we dressed up the Ulcer on the upper part of the Foot, which was over-spread with luxurious Flesh, with *Merc. præcipitat.* the other with *unguent. diapomphol.* &c. and with Compresses and Bandage endeavoured the pressing out of the Matter, and restoring the Foot to some shape. This method was repeated every other day, with Compresses of Tow pressed out of *acetum* wherein had been dissolved *sal nitri, myrrha, camphora,* &c. But finding the *Fungus* still increasing, we applied the actual Cautey, and thereby at once consumed it down to the Bone, and dressed it up with Lenients. From that day's dressing the Matter lessened daily, and grew well digested. After the separation of those Sloughs, we attempted the remaining *Hypersarcosis* in some parts with the Caustick-stone, and in others with *ol. vitrioli.* We applied Dossils of Lint dipt in *spir. vini* on the Bones, and sprinkled the luxurious Flesh in the circumference with *Merc. præcipitat.* as we saw cause. If this Patient had been any whit stronger, I should have used the actual Cautey oftner, and thereby laid all the rotten Bones bare, and dried them with it: but by reason of her weakness and great indisposition of Body, I proceeded for the most part with *Præcipitate*, as aforesaid, and dressed her twice a week, or every third day; during which the Foot recovered a better shape, the Ulcers also discharged less Matter, and she was more at ease. Her Physician prescribed Internals, to resist the several Accidents, and corrected the acidity in her Blood; so that she seemed to recover: but of late, the weather being very cold, she is subject to a *Diarrhea*, and I fear will die of it.

23. Observation of an Abscess in the Foot, with rotten Bones.

24. Observation of strumous Ulcers on the right Foot, Arms, &c.

A sickly weak Child, scarce 7 years of age, having long laboured under a pain and discharge of Matter from many strumous Ulcers, was at last recom-

mended to me. He had one large Strumous Ulcer possessing the inside of his right Foot, of the compass of a Five shilling piece in silver, and another on the outside of the same Foot, passing its Matter between the Bone leading to the third and fourth Toes into the Sole of the Foot. He had also Ulcers in both his Arms near the Elbow-joynts: likewise a *Struma* suppurated upon the second Joynt of his right Thumb. The middle Finger of his right Hand had a *Spina ventosa*; also the fourth Finger of the same Hand was ulcerated, and the Bones rotten from the second Joynt to the Knuckle. In order to the Cure of this Child there was required a necessity of nourishing it, and correcting the Habit of body: for he was extremely emaciated, and the Ulcers were all corrosive and exceeding painful. Upon which consideration I declined the meddling with him till they should consult some eminent person of our Profession, who might see his deplorable condition, and assist in the Cure. They sent for Sir Fra. Prujeau, who prescribed medicated Broths, cordial Julips, Decoctions of *Sarsa*, and other Specificks proper in his weak condition. Mr. Battersby was his Apothecary.

I began with the opening that Abscess on his Thumb by Incision, whence I discharged a curdled Matter; and feeling that Bone carious, I dressed it up with a Dossil spread with *unguent. basilic.* and a Plaister of the same over it: the other Fingers I dressed with some of the same Unguent, mixt with *Merc. precipitat.* and with *unguent. tutia* over all, endeavouring Digestion there. My main business being, to dispose those Ulcers to a healing condition which were in the Foot, which discharged so large a quantity of Matter, and threatened the corruption of the Bones. I made a search into that Ulcer on the inside of the Foot, and finding it hollow round, I stopt up the Orifice with a Dossil, and applied a Caustick the whole compass of it. To the Ulcer on the other part of the Foot, I also applied a Caustick. The next day I divided these, and after the stuping them with Red wine, I dressed them up with Linients and good Bandage. In the dressing of the Ulcer on the outside of the Foot, perceiving the Matter likely to raise an Abscess in the Sole of the Foot, I passed a Seton-needle between the Bones through that Abscess, and prevented its farther insinuation by keeping that Apertion open. As these Escars cast off, I deterged with *Merc. precipitat.* or the Vitriol-stone, and by Epuloticks lessened the Matter, and cicatrized that Ulcer on the inside of the Foot in three Months. The other Ulcer I cicatrized also to the very *Sinus* passing to the Sole of the Foot: but one of the Bones being there carious gave me a longer trouble. I dressed it with a dry small Dossil; and by keeping the Apertion open under it *in planta pedis*, I drained the Matter, secured the exfoliation of it, and cured it some time after. While these Ulcers were digesting and cicatrizing, I proceeded in digesting and deterging the other Ulcers in the Thumb and Fingers. That in the Thumb I dilated with Gentian-roots, and afterwards drest the Bone with a mixture of *unguent. Ægyptiac: spir: vini: myrrh: and euphorbium* hot upon an armed Probe, and kept it dilated with Dossils and Refrigerants over it. But finding the *Sinus* to abound with Matter, and the Bone render'd incapable of Exfoliating, I passed a small Flat-pointed *Fistula*-needle through the *Sinus*, and made way for the Matter to discharge into the inside; then enlarging that Aperture, I dressed the Bone through it, and permitted the Ulcer above to cicatrize the while: Having thus disposed this Bone to exfoliate, I laid open the *Spina ventosa* by Incision to the Bone; and after dilatarion of the Lips, seeing the bone white, I cut into the thin Shell, and made way for the application of *unguent. Ægyptiac: &c.* by which I dried it within, and disposed it to Exfoliation: and at length a *Callus* filled up that Trough, hardned into Bone, united with the Flesh, and cicatrized firmly.

The

The fourth Finger I would gladly have cut off: but not being permitted, I laid it open by Incision, pinched out a piece of that Bone next the Knuckle, and exfoliated the rest. But the Knuckle it self, being rotten, was so long in exfoliating, that the Joynt contracted, and the Finger remains so weak, that it may well be asked why I took so much pains to keep it on. But I have told you, they would not permit it to be cut off. Those Ulcers in his Arms were cured as generally all such are, *viz.* by removing their Coverture, by the application of Causticks, and eradicating the strumous; of which I have said sufficient. Thus this young Gentleman was at length cured. He bears the marks of his Sufferings, but yet without Lameness or Deformity, save in that little Finger.

A little Boy diseased with the *King's-Evil* was brought to me with an Ulcer between the Joynts of one of his Thumbs, and the Bone carious. I laid open the Ulcer on the inside according to the length of the Bone, and dilated it with Gentian-roots. After Dilatation I dressed the Bone with Dossils dipt in *spir. vini*, rubb'd the loose Flesh with the Vitriol-stone, and applied Epuloticks over it with convenient Bandage. After a few days dressing, observing the Bone rotten, I took hold of it in the middle with a pair of Nippers, pinched it in pieces, and pulled the bits out; then cleansed the Ulcer, and dressed the remaining ends with Dossils of Lint as before. By this method of dressing the *Caries* separated, and the *Callus* united the ends of the Bone. Upon sight whereof I left out my Dossils, brought the Lips together, and with Epuloticks and Bandage cicatrized it firmly. A day or two after the Child came to me with his Thumb bent inward. I reduced it, and sent for a Tin-man, who made me an Instrument, which being put on and fastned about the Wrist, retained it streight. So I dismissed him into the Country: but by their neglect it is somewhat bent.

25. Observation of a strumous Ulcer on the Thumb.

A young Gentleman about 14 years of age, of a weak sickly Constitution from his Infancy, was brought to me sorely afflicted with strumous Ulcers on the Back of his right hand. They had been of many years continuance, and had rotted the Bones. I stopt the Ulcers with Lint, and applied a proportionable Caustick over all. The next day I divided the Escar, and as it separated, I rubb'd the *Hypersarcosis* with a Vitriol-stone, and sprinkled it with *Merc. præcipitat.* Thus I made way to the Bones, and pull'd out what was loose and lay intangled in the Spongy Flesh: the others I kept bare with Dossils dipt in *spir. vini*, applying Pledgits spread with Epuloticks, and Bandage over them. After I had dressed them some days, and had a full sight of them, I pinched the most rotten of them in pieces, dried the others with actual Cautery, and continued the dressing the Bones dry as aforesaid. Mr. *Hinton* was the Apothecary, and supplied him with cordial Juleps and somewhat Antistrumous, he not being capable of much Purging: nor did he need it, for by the method aforesaid the Bones Exfoliated, and the Ulcers cured in the space of eight weeks with a smooth and firm *Cicatrix*. He since enjoyeth his health, and strength in his Hand.

26. Observation of strumous Ulcers on the Back of the right Hand.

Whilst the aforesaid Patient was under cure, a poor Woman brought her Child to me with a strumous Ulcer on the left Hand swell'd and inflamed. I made a search, and felt the Bone leading to the middle Finger bare. It not being the time of publick Healing, I made Incision upon it, fill'd the Ulcer with Dossils of Lint dipt in *Merc. præcipitat.* and dressed it up with Digestives and *empl. è bolo.* After Dilatation, finding the Bone loose, and started up at that end next the Knuckle, I raised it, and separated it from the *Metacarpium*: then dressed the Ulcer with Dossils dipt in *pulv. Galeni*, and from that time deterg'd and incarned; during which it contracted narrow, and cicatrized by the application of the common Epuloticks.

27. Observation of an Ulcer on the left Hand.

28. Obser-
var. of Ul-
cers on the
Thumb
and great
Toe.

29. Obser-
var. of
strumous
Ulcers on
the Wrist
and great
Toe.

A Young Woman came out of the Country with strumous Ulcers in the Bones of one of her Thumbs and one of her great Toes, near the last Joynt of them. I laid them open by Caustick, and dilated them with Gentian-roots and Dossils of Lint: afterwards I dried them with actual Cauteries, and kept them dilated with Dossils of Lint pressed out of *spir. vini* some weeks. During which time I let her Blood, purged her, and prescribed her Antistrumatics, accordingly as hath been proposed in the method of Cure. One day in pulling the Dossils out of the Ulcer in the Toe, a big piece of the Bone came away with them. Finding no more upon search, I permitted that Ulcer to heal up by lessening the Dossils. But growing afterwards weary with the expectation of the Bone's exfoliating in the Thumb, I pinched off the rotten part of it, dressed the Bone with Dossils as before, and soon after saw a *Callus* rise out of that broken Bone, which uniting with the rest of the Ulcer incarnated it, and it cicatrized in few days after under the Dossils.

A Child about 4 years of age, of a sickly and indisposed Habit of body, being diseased with strumous Tumours, was commended to me by Sir *Alex. Fraſ.* and Sir *Fra. Pruj.* who were his Physicians. One of the Tumours lay transverse the inside of the Wrist, and seemed to have Matter in it: the other lay upon the Joynt of the great Toe under the Nail. I concluded the Bones foul in both places, and began with that in the Wrist by the application of a mild Caustick. That night the Child was seized with a pain in its side and a Fever. This was thought by the tender Mother to proceed from the application of the Caustick: but the Child soon recovering out of it, she was satisfied by her Physicians otherwise, and I was permitted to prosecute the Cure as I judged necessary. Whereupon I went on in dividing the Escar, and gave vent to a curdled Matter, dressing it up with Lenients, and provided against the next dressing a *Fotus* discutient and drying. At the next opening I fomented the Tumour, sprinkled *Præcipitate* into the divided Escar, and dressed it up. After separation of the Escar, the Ulcer appeared full of a luxurious Flesh, and the Matter abounded much. I made a search with a Probe, and found a *Sinus* between the *Radius* and *Ulna*, and the Bones carious. I laid open that *Sinus* by Caustick, and after separation of the Escar, deterged with *Merc. præcipitat.* &c. and kept that part dressed with Dossils pressed out of *spir. vini*. There was in the Child such an acrimony in his Blood, that I could not keep the Ulcer digested 2 days, nor check the influx of Matter, it insinuating it self into the Wrist in spite of all my endeavours. The very transpiration behind his right Ear ulcerated, and grew difficult of cure. Upon sight whereof the Physicians prescribed as followeth; *Rx antimonii diaphoret. in crucibulo per duas horas ignit. q. s. sumat ad quantit. gr. vii. tribus horis medicin. in conf. anthos 3ß superbibendo aquæ infra præscript. cochl. vii. pro singulis vicibus, quarto quoque die sumat Calomel. gr. xij. resinæ jalapii. iv. conf. flor. cichorei q. s. & fiat Bolus: abstineat illis diebus ab usu antimonii diaphoretici. Rx sarsaparillæ lbj. ras. corn. cervi, eboris, an. 3iij. fol. agrimon. veronicæ utriusque, an. Miiij. santali albi, rubi, an. 3ij. liquiritiæ Anglicæ lbj. lactis vaccini cong. ij. in organ. commun. distill. liquoris distillati singul. lbij. adde tabell. ocul. canceror. 3ij. sumat ad quant. 3vj. singulis dosibus, addendo aq. cinnam. hordeat. cochl. ij.* During the Patient's taking these Prescriptions, the Matter relaxed the Ligaments and Tendons; inso-much, as coming one day to dress his Hand, I found it crooked, as if it had been fallen off from the Joynt. I raised it up, and causing it so to be held, I took off the Dressings, and saw the Joynt far separated in the upper part. I presently sent to Mr. *Stockdale*, and directed him in the making an Instrument to retain the lower side of that Hand and Arm, and hold it even, and in the mean time I bolster'd it up. The Instrument being made, I placed the Hand

Hand in it, and by Screws fixed to it I kept the Joynt close and firm, and did not take it off till that Ulcer was cured, but proceeded in the way of dressing as abovesaid, laying open some *Sinus's* on the Back of the hand, and making Compression upon others. The carious Bones were dressed with a mixture of *unguent. Ægyptiac. extract. scordii, pulv. euphorbii*, and *spir. vini*, applied hot with armed Probes and Dossils: the luxurious Flesh was dried and consumed by Escaroticks, and the Ulcer cicatrized from the circumference with *unguent. iutia*, &c. Having thus in some measure checked the Fluxion, and disposed the Hand to cure, I began with that Tumour upon the Toe by the application of a Caustick, and gave vent to a curdled Matter. Upon search, finding the Bone carious, and part of it lying under the Nail, I was necessitated to apply a small Caustick thereon; which having softened the Nail, I cut it off, made way to the Bone, and dressed it with Dossils of Lint pressed out of *spir. vini*: afterwards I dressed it with a mixture of *unguent. Ægyptiac.* &c. upon an armed Probe hot, and disposed it to exfoliate. This Child had an extreme ill Habit of body, the Ulcers frequently corroding one part as it healed in others, or fermenting in his Blood, and affecting his Lungs or his Bowels with bilious Colicks, &c. so that the Physicians met also with much difficulty. But at length an Exfoliation of the Cartilage of the Joynt of the Toe cast off, so also the *Caries* in the Bone, and that Ulcer cured: two slips of Nail also thrust out from the remaining Ligament along the sides, but there grew none on the middle. The Ulcers on his Hand and Wrist also cicatrized firm: but the Ulcer between the *Radius* and the *Ulna* did not cast off its Bones; but being well digested, and the Bone disposed to Exfoliation, it was thought fit to supply them with Medicaments and Directions, and remove him into his own Country, to take the benefit of the Air. He did so, and Dr. Barker of Newb. took care of him there. During his being there he recovered a better measure of health, and was afterwards removed into Northamptonshire; where I attended him, dressed that Ulcer between the *Radius* and *Ulna*, and left my Servant Mr. To. who perfected the Cure. Since which time the Patient hath enjoyed his health very well, and the use of that Joynt. And indeed, if the Member be kept in its true position, and the joynt above it, whether Elbow, Knee, &c. be some time stretched out, such young people fail not of the use of their Limbs: but where the position of the Member is neglected, the Cure succeeds ill, and a Lameness remains ever after.

A young Gentleman aged 12 years, being much emaciated and diseased with the *King's-Evil*, was brought to Dr. Bate's house, where Dr. Willis and myself met at the Consultation. He had an Ulcer on the outside of his left Foot. Upon search with a Probe the Bone leading towards the little Toe felt carious the whole length; the Foot was much swelled, and seemed to have several Abscesses lying amongst the Bones of the *Tarsus* and *Metatarsus*. The way I proposed of Cure was, by the laying open the Ulcer, and exfoliating of that Bone, and so to proceed in the rest of the work as I saw cause. This being approved of by Dr. Bate, he prescribed a lenitive *Bolus* with a few grains of *Calomel.* to be taken once in 4 days, and *Bezoard. mineral.* with a Decoction of *sarsaparill.* and *lign. lentisc.* &c. to be drank the intermitting day. The next day, I began my work with the application of a Caustick, and enlarged that Ulcer; then laying the Bone bare, I found it rotten the whole length, and a *Sinus* stretching transverse over the Foot, from whence a quantity of matter flowed, which being retained by the aforesaid Bone, threatened a corruption of the rest, as also a passing of its Matter down to the Sole of his Foot. Upon which consideration I thought it necessary to remove the lower rotten Bone by pinching it in pieces: but it not yielding thereto, I sawed it, and took it out.

By

30. Observat. of strumous Ulcers on the Foot with rotten Bones.

By the removal of this rotten Bone the Matter had a free discharge, and I had the conveniency of applying my Medicaments to exfoliate them, and to cleanse the Ulcer; which I did by *mundif. Paracels. unguent. fusc. tinctura myrrhae, &c.* and digested the Lips of the Ulcer with *unguent. basilicon*, and cicatrized them with *unguent. tutia* and the Vitriol-stone. During which I applied Stupes of Tow prest out of a Solution of Nitre and Myrrh in Wine Vinegar, and by Compression with a laced Sock thrust the Matter out of its several Cavities. Yet in a declining part of the inside of the Foot I afterwards feeling a small collection of Matter which could not be discharged that way, I gave vent to it by Caustick, and digested it. After I had thus made way for discharge of the Matter, I restrained the Humour from flowing into the Foot, and restored it to its natural figure, having no more left to do, but attend the Exfoliation of the several Bones. Dr. Willis began to purge the Patient with the above-prescribed *Bolus*: but there happening thereupon a Superpurgation, he declined the repeating of that Purge, and omitted the prosecuting of the aforesaid Course prescribed by Dr. B. upon which the Matter fermented, and caused a pain in the Knee of his other Leg Dr. Bate being deceased, Dr. Tho. Cox was consulted, and advised the repeating of *Calomel. &c.* But it not being prosecuted, other pains arose. During which it happened that an old Gentleman came in, who had formerly lived in the *Barbadoes*, and practised Chirurgery amongst his Slaves. He desired to see our Patient dressed, and seeing the Foot without Tumour, and the Matter little and well digested, confidently undertook the Cure, by the giving him a Wound-drink, and applying an Ointment to the Ulcers. The Parents rejoicing to hear their Son might be so easily cured, desired me to give way to it, and permit my Kinsman *Jaques Wiseman* to dress him with that Unguent, (which was no other than the Juice of Clowns All-heal made up with Butter or Hogs-lard.) I complied with their desires, but withal advised them to leave off the use of the Bandage, knowing well that it would swell, and discourage the Undertaker. But they continued it; and after some of their Servants had learned how to dress him, they dismissed my Kinsman. I would gladly have finished the Cure, but I took my leave by the way of a Letter, wherein I predicted what followed: for what could be expected from greasy Ointments, but corruption of the Bones; This young Gentleman being thus taken out of my hands, gave occasion to some envious men of my Profession to report it otherwise to my prejudice; whereof I have here inserted the Letter I received from his Father in answer to mine.

Sir, I do not Doubt but you used your best Endeavours, and observed those Rules and that method which your judgment thought best for the Cure of my Son; and consequently you may well have those Apprehensions which you yesterday signified to me both by Discourse and Letter, that the way he is now in may be prejudicial, if not ruinous to him. Upon which intimation you will easily believe I am in a streight, and cannot regulate my actions with that clearness and satisfaction as I desire. But having heard of divers instances of undoubted truth, and from persons of Honour and Quality, of Cures that to their knowledge had been wrought by plain and empirical Medicines in short time, and with much ease, after the means more potent and noble, and managed by expert Artists, had been long tried, and proved successless; I resolved, though with some reluctancy, to run the like adventure, and make an essay of Col. Midd's Receipt, and see whether my Son may have the like good fortune. And being entred into that Course, without any discouragement hitherto discernible, and being to leave the Town to morrow, I cannot now of a sudden recede, and take up a new resolution. I shall leave my Wife here with the Child for some weeks: in which time if any Alteration appear

to make it Evident that we are in an Error, I shall thankfully accept your offer to rectifie us, and set us in a more rational way. In fine, if the issue be unfortunate, I must confess that you have discharged your duty in giving us the advertisement, and that nothing of blame can reflect upon you; the fault as well as the loss will be our own.

Sir, I am your very affectionate
Friend and Servant,
W. Y.

A Child of about 5 years of age came out of the Country the Summer after the burning of the City of London, with an Ulcer in his Heel and another in his Arm, with carious Bones. His Friends consulted a Chirurgeon of their acquaintance, who perswaded them to return with the Child into the Country, telling them Time would cure it. But that proving an ill Chirurgeon; and not performing it, they brought the Child again about a year after to London, and came to me with him. He was then languishing under a Heftick Fever, the Ulcer in the Heel was very large, and the Bone totally rotten. There was also another upon the *Os astragali* as bad, and others upon those Bones which led to the second and third Toes. On the outside of the other Leg there was a sinuous Ulcer, and the lower part of the *Fibula* was carious, as likewise was the inside of that Ankle. The right Hand was ulcerated from the Wrist upon the Arm between the *Radius* and *Ulna*, making Ulcers on both sides of the Bones: they were also carious the length of between two and three inches: his Neck was also full of *Strumæ*: and to these he had an *Ozæna*, and a thick chapt Lip. I would gladly have declined the meddling with him, as being myself then much indisposed, and the more at the sight of this miserable creature, whose condition I knew not how to help. For to propose Amputation of a Leg or Arm in this Patient, might have favoured of much cruelty, but availed nothing, while the other Parts were so diseased. But his Friends would have no way: they brought him to my house, and obliged me to dress him. I began my work with that Ulcer beneath the Ankle on the inside of the Foot. The opening being small, and the Ulcer and *Caries* large underneath it, there was a necessity of laying it open to come to the Bone; Injections signifying nothing there but to make the Ulcer more sinuous: yet the laying it open was hazardous, by reason of the Artery which passed over the carious Bone: but there was no avoiding it. Therefore placing the Child upon a Table near me, I applied a Caustick upon the Abscess. Then, while it was working, I dressed the other Ulcers, which was at least an hours work, That done, I caused an actual Cautery to be put into the fire, ready for my use in case of need, then took off the Dressings from the Foot; and finding the Caustick had work'd as I designed, I made Incision overthwart the Escar to the Bone, by which I divided the Artery. The blood bursting out with great force, I fill'd up the Incision with Dossils dipt in *pulv. sine pari Jo. Ardern* with Emplaister over it. Whilst I was binding it up, I bethought my self, if by any accident it should chance to burst out again, the Child might bleed to death before I could have notice; or they might alarm me in the night upon a suspicion of his bleeding, when I should not be so provided to resist the Accident as now I was: and withal considering, I might at the same time secure the bleeding, and dry the *Caries* in the Bone, I unbound it, threw out the Dossils, and applying the actual Cautery in the place, stopt the bleeding, and dried the *Caries*: That done, I dressed the Bone with Dossils dipt in a new-laid Egg, and applied on the Escars *unguent. refrigerans Galeni cum empl. è bolo*, with Compress and Bandage dipt in Oxycrate: After which they carried him

31 Obser-
var. of
strumous
Ulcers
with rot-
ten Bones.

him home. Dr. *Quarterman* was their Physician, and prescribed him Anti-strumatics, &c. The Ulcer in the ancle bled no more, nor was that Bone much troublesome after. We laid open the inside of the Arm by Caustick; and feeling the Bones carious, and the great Artery lying in our way, we cut off that, and by the actual Cautery dried it; then made way to the other carious Bones, and laid them open. Then cutting open the outside of the Heel, and seeing that extremely rotten, in some parts quite through, we opened the other side, took part of the Heel-bone out, and dried the remainder with the actual Cautery, then dressed the Ulcers with *mundif. Paracelsi* with and without *Merc. præcipitat.* Some of the Bones less carious we dressed with *extract. scordii*, and others with *unguent. Egyptiac.* and *pulv. myrrhæ*, &c. applying *unguent. tutiæ* over the tender Lips. To the *Ozena* we used Injections of *decoct. hordei cum sem. sydon*, &c. and *ol. amygd. dulc.* to bring off the crusts: then with Decoctions of *rad. bistort. tormentil. rad. ireos. flor. ros. rub.* and *bacc. myrtill.* decocted in a Chalybeat-water, we dried the Ulceration. To his Lip we used a *Fotus* of an emollient Decoction, also a *Pomatum* with *arcan. coral-linum.* Thus we proceeded with great industry: but as some Parts cured, others brake out, and the Patient died in a *Marasmus* after all our Endeavours. Yet that you may not be discouraged in giving your assistance towards the curing these sorts of Ulcers with *Caries*, I have here inserted one Observation as it was communicated to me by Mr. *Clarke*, a Chirurgeon dwelling at *Bridgnorth* in *Shropshire*, who was sometime my Servant.

Honoured Master,

You may please to remember that about 2 years and a half since I writ to you concerning a Scrophulous person, who was extremely diseased, and had passed under several hands unsuccessfully. To which you returned me a long Letter of advice. He had a large hard Tumour in the right Inguen, which reached down in scirrhus Knots all that Thigh and Leg. He had many Ulcers on that Foot, one whereof passed through the Ancle, and rotted part of the Os naviculare. There was an Ulcer on his Heel, and another upon the Tarsus; in both which the Bones were foul. He had also many Ulcers upon the Metatarsus. You were pleased to prescribe him a purgative Pill, with *Merc. dulcis* to take twice a week, also a decoct. *sarsæ*, &c. for his usual drink, with *antimon. diaphoret.* to sweat thrice a week. All which we observed. The Ulcers were laid open as you advised, and those Bones I could lay bare were dressed with *pulv. rad. aristoloch. rot. euphorb.* &c. by which they were exfoliated. I kept the Ulcer in the Ancle open with a Scane of Silk the space of ten weeks, and syringed it daily with a Tincture of Myrrh. in aq. Mercurial. and aq. calcis, till the Bones cast off, then healed it. The aforesaid Water served me to deterge and cure the other Ulcers. The scirrhus Tumours and Knots were embrocated with *unguent. ad strumas*, and at length resolved thereby. He walks abroad with an under-hand Staff and laced Boot with a high heel, and is ever bound to thank you for it, and so is

Bridgenorth,
Novemb. 26. 1675.

Your most obliged

Servant,

Willam Clarke.

C H A P. V.

Of Ophthalmia.

SORE Eyes are frequently a Species (as I have said) of the *King's-Evil*, and take their beginning from vicious Humours inflaming the *Tunica adnata*, which increasing doth also sometimes affect the other Tunics, as the *cornea*, &c. with great pain, tension, pulsation, &c. whence *Pustule* arise and suppurate, terminating for the most part in Ulcers, which leave hard *Cicatrices*, and by reason of the Defluxion falling upon the edges of the Eye-lids, do make a Blearedness: upon which account these Inflammations are generally called *Lippitudo* by the *Latins*.

This differeth from the common *Ophthalmia*, in that it is periodical, and is accompanied either with strumous Swellings in the Neck, a thick chapt upper Lip, *Ozena*, or some other Accidents. Difference.

The *Causes* are the same with those of the *King's-Evil*; yet may it be more particularly imputed to abundance of humidity repleting the Head, and descending to the weak Eyes. Causes.

The *Signs* of *Ophthalmia* are apparent by what I have already delivered of the Disease. Those of the *Causes* are as followeth. If the *Ophthalmia* be from Plenitude, the Face is high-coloured, the Eye-lids somewhat swelled and inflamed, the capillary Veins large and full; yet the Humours are not so apt to fret as in other cases, nor is the pain extremely vehement. If the Disease be from Choler, the Visage is not red, but the pain is sharper, and with Excoriation of the Eye-lids. If the *Ophthalmia* proceed from Pituitous Humours, all the fore-mentioned Symptoms of Inflammation, Pain, &c. are more remiss, and the lacrymal Humours are not corroding, unless there be a mixture of saline Humour joyned with it. Whether an *Ophthalmia* may arise from Melancholy, I doubt; but if it do, there is small fluxion or pain. That proceeding from the *King's-Evil* is of an acid quality, with sharp fluxion and pain; the Eye-lids are also more apt to be gummed together with a viscous Humour than they are in those from the other aforesaid Causes. Whether the Humours affecting the Eyes flow from the external or internal Vessels, may be discerned by their complaint. For if they flow from the *Pericranium*, &c. the pain, pulsation, with heat in their Forehead and Temples, will demonstrate it: but if the contrary, the pain will be more intense, and deeper within amongst the Membranes; there will be also an itching in the Palate and Nostrils with frequent Sneezing. Signs.

The Time of the Inflammation ought also to be considered in order to the Cure, and is thus discerned: in the beginning the Eyes look red, and the Humours distilling upon them are thin; in the augment, heat and pain increase; in the state, the accidents of Inflammation and pain are great, and the Humours thicken, and do gum the Lids together, especially in the night; in the declination, the fluxion, pain, &c. do visibly diminish.

Ophthalmia strumosa is of most difficult Cure, and in Children very vexatious, by reason of the humidity they abound with; also because of their frowardness, and incapacity of taking proper Remedies, or admitting external Applications: and in consideration of the laxity of their Eyes, they are subject to relapse upon every little disorder. Those arising by consent from internal Parts, *Dura mater*, &c. are incident to more grievous Symptoms than those which proceed from the *Pericranium* and other external Parts. Prognostick.

If in an *Ophthalmia* the pain, &c. persevere any long time, there is danger that the Tunics of the Eye may be corroded: and if the *cornea* happen to have been long ulcerated, a Blindness followeth, or at least a Dimness of sight, by reason of the condensation of a gross Matter about the Pupil.

Cure.

In order to the Cure, their Diet ought to be of Meat of easie digestion, as hath been shewed in the method of Cure of the *Evil*, with great moderation avoiding all sharp, salt, hot or spicy Meats, and such as may beget Crudities. In the beginning of the Disease Wine is forbidden. Hydromel is allowed: but in hot bilious Defluxions *decoct. hordei cum tantillo aq. cinnam.* is only permitted. The Air ought to be pure and temperate; that which is windy, dusty or smoaky, being offensive to the Eyes; so is Sun-shine: therefore we advise them to wear somewhat of Silk or Linen before their Eyes, commonly a piece of green Sarfanet. Exercise of all kind is forbidden, and Quiet enjoined. Sleep is in these Diseases necessary, when they can get it, the Eyes enjoying Quiet the while, which mightily conduces to their Recovery. Their Bodies ought to be kept soluble by Clysters and lenient Purges; strong Catharticks being not approved of in Diseases of the Eyes. Yet according to *Hippocrates*, *Ophthalmia laboranti alvi profluvium bonum est*: and we sometimes see after a Superpurgation the Fluxion much diminished: but that may rather be imputed to Nature, which so disburtheneth her self. In prescribing to these Diseases the Constitution must be considered, and after Purging, Anodynes are necessary, to quiet the Fermentations raised thereby; to which purpose conduce *syrup. paralyseos, de papavere erratico, de papavere composit.* *Mesua*, of which this is the Prescription. *R. caput papaver. albi & nigri cum suis seminibus an. 3vj. & 3ij. capill. Veneris 3xv. glycyrrhiz. 3v. jujubar. num. xxx. sem. lactuce 3v. malva, cydon. an. 3vj. coq. in lbviii. aq. font. ad medietatis consumptionem; post modicum R. colaturæ lbij. penidiorum, sacchar. alb. an lbj. fiat Sympus.* All the testaceous Powders prescribed in the general Cure of *Strumæ* are here of use, also *Calomel. Merc. præcipitat. alb. Merc. diaphoret. bezoard. mineral. antimon. & ceruss. diaphoret.* avoiding Salivation, by purging the Mercury off sometimes with *infus. rhab. syr. rhab. & de cichoreo cum rheo, diasereos, &c.* In the declining of the *Ophthalmia*, and indeed after general Evacuation and diversion of the Humours, you will find bathing the Body in Water lukewarm of great advantage to temperate hot and sharp Humours, if the Season of the year and their Age be capable of it.

Derivation is necessary in this Disease; and if there be Inflammation, or that Blood abound, they may bleed by Lancet in the Arm, Neck, &c. otherwise by Leeches behind the Ears. Shaving the Head, Blistering, Cupping, Fontanels and Setons are of frequent use: but Fontanels made in the Neck do often cause *Strumæ* to arise thereabout; therefore Sir *Fra. Prujean*, some years before his death, prescribed them behind the Ears.

In the application of external Remedies to the Eyes, we ought not to be over-forward; for the mildest Medicaments dropt into them prove generally offensive in the beginning of Inflammation: besides, we see in our daily practice, that the less disturbances of them go off by general Evacuation and Derivation; and that those Eyes have fared worst which have been most treated by Topicks. We may apply Intercipients upon the Temples of Mastick, *Takamahac. empl. ad herniam, &c.* Frontals may also be applied of *bal. Armen. sangu. dracon. balaust. cum aceto & albumine ovi.* If you judge the Humour to flow from the *Pericranium* and external Parts, you may apply Astringents to the Jugulars and round about the Neck. But if the Inflammation be sudden, and the pain vehement, after Evacuation by lenient Purgatives, or a Clyster and Venæsection, you may have recourse to Anodynes; amongst which

Breast-

Breast-milk and the white of a new-laid Egg have precedency, applied externally, or dropt into the Eye. There are Objections made against the use of them both, *viz.* that by the dropping of Milk into the Eye it may curdle, and by its Acrimony offend the Eye: so also the white of an Egg may by its incrasating quality increase the heat in them. To prevent these inconveniences, you may mix them with Rose-water, or use them with more caution. In the preparing Medicaments to drop into the Eyes, the Ingredients mixed with the *Collyria* ought to be well washed, that they may be without Acrimony, and so subtilly powdered, as that they be not in the least gritty. The Decoctions ought also to be cleanly made: and in the dressing of the Eyes there ought to be especial care in cleansing them and their Lids of viscous Matter; to which purpose an Eye-cup is most necessary. This being observed, you may apply mucilaginous Liquors, or Cataplasms; for they are good Anodynes. *R. mucilag. sem. psyllii, cydonior. cum aq. ros. & papaver. extract. an. ʒj. camph. croci, an. gr. vj. album ovi, Misc. Or, R. medullæ panis alb. in lacte & aq. ros. macerata, pulpæ pomorum dulc. an. ʒj. mucilag. sem. psyllii & fenugrac. aq. papaver. extract. an. ʒʒ. vitell. ovi, camph. gr. vj. croci ʒj. Misc.* If pain be vehement, you may add to either of them two grains of Opium, or a *mucilag. sem. papaver. albi extract. cum aq. plantag. ros. &c.* applied in the form of a Cataplasm.

But if the *Ophthalmia* be not accompanied with grievous pain, you shall then consider whether the Disease be in its beginning, state, or declination, and proportion your Medicaments accordingly. For let the Empiricks boast of this or that universal *Collyrium*, they cannot cure these *Ophthalmie* with any one particular Medicament: for in the Beginning of Inflammation they require Repellents, and in the increase somewhat of Resolvents ought to be mixed with them; in the State they ought to be treated with Resolvents of a digestive quality, and in the Declination with Resolvents and Deterfives of an exsiccant quality. Authors do not all agree of the set time when we should begin our Applications to the Eyes; but all of them concur in the proceeding first with general Evacuation and Diversion of the Humour, and afterwards, suppose about the third day, to use *Collyria*. They ought to be moderately repelling; not too stiptick, lest the Tunicles of the Eyes be thereby dried, and prohibit transpiration, and so increase the pain.

We begin with Repellents: of which sort the strongest are the Whites of new-laid Eggs beaten to a froth with a piece of Alum. You ought to apply it to the Eye-lids, the Patient lying upon his Back the while. This is only proper in the beginning of hot Defluxions. *R. troch. alb. Rhas. ʒʒ. bol. Armen. ʒj. aq. ros. rub. lact. muliebris, an. ʒʒ.* mix them in a Stone-mortar, and strain it out for use. *R. pulpæ pomor. acidor. vel cydonior. coct. in aq. ros. & plantag. ʒij. sumach, balauſt. flor. ros. rubr. pulver. ʒʒ. far. bordei ʒj. succ. sedi maj. plantag. an. q. s. Misc. & fiat Cataplasma.* After the taking of the Cataplasm, foment with this: *R. fol. plantag. Mj. flor. ros. rub. Pj. balauſt. ʒij. coq. in aq. equiseti & ros. an. q. s. fiat Fotus.* The third day, or accordingly as the Disease indicates, we add Discutients to the Repellents. *R. flor. stachados, sambuci, an Mʒ. flor. ros. rub. Pj. coquant. in aq. plantag. pro Fotu. R. colaturæ superscript. ʒij. sarcocol. ʒj. lap. titiæ preparat. ʒʒ. nutriatur in mortario marmoreo, & coletur pro usu.*

In the State of the Disease Authors generally apply Resolvents, *viz. sem. lini, fenugrac. althæa, flor. meliot. chamam. &c.* decocted in Water, and applied warm with Stupes. It asswaged the pain by breathing out the gross Matter. The *Collyria* may be a Solution of *thus, sarcocoll. sacchar. albi, lap. titiæ, &c.* in the preceeding Decoction: Or, *R. decoct. sem. fenugrac. ʒij. thuris, sarcocoll. an. ʒʒ. croci ʒʒ. Misc. probe, & oculo instilletur.* To prevent the gumming of the Eye-lids, cut a piece of Sponge fit to recover the Eye, and

at night, when the Patient is in Bed, dip it in *aq. verbenæ, euphrasæ, rosar.* any one of them, and lay it wet upon the Eye, the warmer the better, so it do not scald. This will keep the Eye cool, and suck up the moisture.

In the Declination, *Rx tutiæ præparatæ ʒj. aloes lotæ ʒß. sacchar. alb. ʒij. infund. in aq. feniculi, verbenæ, euphrasæ, rutæ, an. ʒj. postea colentur, & ad usum servantur :* Or, *Rx vitrioli albi, tutiæ præparat. an. ʒj. camphoræ ʒj. infund. in aq. ros. pro Collyrio.* In case the Tunicles of the Eye grow too dry, *Rx folior. endiviæ, nymphææ, lactucæ, solani, flor. violar. ros. rub. an. Mj. radic. althææ, ʒijß. sem. fenugraci ʒij. coq. pro Fotu.* After the use whereof you may apply unguent. *tutiæ mag. ad oculos ;* or this, *Rx butyri Maialis sine sale, unguent. rosat. lot. in aq. ros. an ʒijß. lithargyr. aur. & argent. an. ʒj. aloes ʒij. camphoræ ʒß. Misc. S. A. in mortario plumbeo pro usu.* These are to be put into the Corners of the Eyes at night going to bed ; and in the morning cleanse them with this or such like : *Rx aq. agrimon. rosar. lactis muliebris, an. part. æqual. Misc.* In other cases greasy Unguents ought not to be applied to the Eyes.

1. Obser-
vat. of
Ophthal-
mia.

A Child about six years of age, hitherto subject to the *King's-Evil*, was the last Summer distempered with a heat scattering over her Head, Face Neck and Shoulders, which meeting with some check returned inward, and affected her eyes with Inflammation and great Fluxion. Upon notice thereof, I directed a Clyster of Milk, Sugar, and a little Salt, applied *empl. ad heriniam* upon her Temples, and prescribed the dressing her Eyes with Breast-milk *cum albumine ovi conquasset.* and Cloths to be dipt in the same, to lie on all night. The next morning Leeches were applied behind the Ears, and 4 or 5 Ounces of blood was taken away ; that day also a Clyster was again repeated, and the Applications to the Eyes continued. The next morning were given her 7 gr. of Calomel, with 15 gr. *sacchar. alb.* which purged her 4 times. That night she took of the anodyne Syrup. *cocbl. 1. in aq. papaver. ʒijj. aq. cinnam. hordeat. cocbl. ij.* also a Cataplasm *ex pomis acid. &c.* was applied. She rested well that night, and in the morning her Eyes were marvellously recovered.

2. Obser-
vat. of
Ophthal-
mia.

A Child of about ten years of age, having been long diseased with sore Eyes, and passed through most of the Empiricks hands in the Town and Country, came to me, with great Fluxion, *Pustulæ* and *Cicatrices* from former Eruptions. She had also some small Glands on both sides of her Neck. I applied Plaisters upon her Temples to resist the Influx, and made Fontanels behind both her Ears by Causticks. I likewise fomented her Eyes with a Decoction *ex flor. sambuci, chamæm. stæchad. ros. rub. & furfuris,* and brought her an Eye-cup, and a Collyrium of *sarcocoll. lap. tutiæ & sacchar. in aqua pomor. dulc.* to wash her Eyes. I purged her the next morning with *infus. senæ, rhab. &c. cum syrupo. ros. & agarica,* and laid her to rest at night with an Anodyne draught. The day after drew some blood by Leeches behind her Ears ; and the next day prescribed her a medicated Ale of *sarsa lign. lentisc. with milleped. &c.* for her constant drink ; with which she took *antimon. diaphoret.* Once in 4 or 5 days I purged her with *Merc. dulc. cum saccharo ;* and those days she did not purge, I bathed her in Milk and Water temperately warm. I did not use many Collyria. A Solution of *lap. tutiæ cum sacchar. in aq. plantag. & ros.* finished the Cure ; which indeed was done by contempering the acid Humours. There remained some *Cicatrices*, which I left to wear off, it being the work of Time ; which accordingly effected it. The Glands did resolve during her Course of Physick, and she continueth very well to this day.

3. Obser-
vat. of
Ophthal-
mia.

A Child aged about 10 years was diseased with a sharp Defluxion on both her Eyes, with an *Oxana*, and thick chapt upper Lip. She had also a Fontanel in her Neck, which was much inflamed, and many Wax-kernels about it :

it : which I supposing to arise from the anguish of it, threw out the Pea, and dressed it with Lenients, at the same time applying Causticks behind her Ears. I also applied *empl. ad herniam* to her Temples, and prescribed a Fomentation and *Collyrium*, as it is set down in the method of Cure in the State of the Fluxion. I advised the snuffing up of *ol. amygd. dulc.* to free her Nostrils of the crusty Matter which hinder'd her breathing, and afterwards prescribed her a *decoct. hordei cum radicibus althææ*, which was cast up her Nostrils with a Syringe, desiring her to forbear picking of her Nose. Her Lip was fomented with some of the said Decoction, and anointed with this following Unguent: *R. servi vitulini & agnini an. ʒij. unguent. refrig. Galeni ʒj. succ. plantag. solani, an. ʒx. coquantur ad succor. consumptionem : Colatura adde cerussæ ʒij. plumbi usti ʒvj. litharg. aur. & argent. an. ʒβ. antimonii, tutiæ, an. ʒiij. olei vitell. ovor. ʒx. cere alb. q. s. fiat Unguentum S. A.* During these Applications a Clyster was prescribed, and she was purged with *infus. senæ, rhab. &c.* and afterwards *Calomel.* was appointed her once in 3 or 4 days, also a medicated Ale of *sarsa, lign. lentisc. milleped. &c.* for her constant Drink. *Bezoard. mineral.* was likewise prescribed those days that Purging was intermitted. By this method the Fluxion was removed from the several Parts, and the Ulcerations dried up: those in her Eyes by *Collyria* of *lap. tutiæ, calamin. &c.* and the *Oxæna* by *decoct. rad. tormentill. bistort. sumach. balauft. &c. in aq. chalybeata.* Towards the end of her Course of Physick, observing her Skin rough and dry, I caused her to be bathed in Water temperately warm, with a bag of Bran to sit upon. A *Cicatrix* remained upon one of her Eyes, but it afterwards wore off.

A Child of about 5 years of age was brought out of the Countrey to me with great Defluxions in both his Eyes, and his upper Lip swelled from the same Humour. He had passed through various hands unsuccessfully in the Countrey. I purged him with *infus. rhab.* in small Beer, *cum syr. diasen.* and once in 2 or 3 days gave him a few grains of *Merc. diaphoret.* and some nights an anodyne Syrup *in aq. papaver.* I also prescribed a *Fotus* and *Collyrium*, as is set down in the method of Cure in the State of the Fluxion. By which method the Fluxion ceased, and he recovered in 10 or 12 days. A few days after he fell sick of the Small-pox, of which he likewise recovered. I then designed the Purging him : but his Friends not thinking it necessary, I desisted from visiting him, till his Eyes inflamed again ; and then they sent for me. I purged him with Whey, Manna, and *sal. prunell.* applied Repellents to his Forehead and Temples, and drew blood by Leeches behind his Ear ; also repeated lenient Purgatives with *Calomel.* once in 3 or 4 days, and made Fontanels behind his Ears ; his Hair was shaved off his Head, and a quilted Cap was put on. Anodynes were dropt into his Eyes, according to the method proposed in painful Defluxions ; by which they were eased. But soon after he fell into a *Diarrhæa*, by which he was perfectly freed of the Defluxion on his Eyes and Lip. But the *Diarrhæa* terminated in a *Dysenteria*, and weakened him much. I prescribed him *decoct. corn. cervi usti*, with a few *rad. scorzonere, cinnamomi*, which he drank with Milk. Clysters of Milk *cum vitell. ovi* were frequently administered, and a few drops of a liquid *Laudanum* at night in the afore said Decoction. Afterwards I strengthened his Bowels with *elect. diascord. conf. ros. rub. pulv. Rhei, &c.* by which he was also moderately purged. He afterwards recovered strength by continuing his Milk-drink. During his *Diarrhæa* I healed up the Fontanels behind his Ears, and after his recovery made him a Fontanel in one of his Arms, and dismiss him. He was afterwards in the Countrey subject to some little weakness in his Eyes at times, upon some accident of cold ; upon which account his Friends consulted me ; but of late years he had been very well.

4. Observat. of Ophthalmia.

A Child

5. Obser-
vat. of
Ophthal-
mia.

A Child aged 3 years was brought to *London* to me with sharp Defluxions upon both his Eyes, and *Strumæ* on both sides of his Neck. I applied *emp. ad herniam* to his Temples, fomented his Eyes with Repellents and Discutients, and made Fontanels behind both his Ears. The second night after I gave him viij. gr. *Merc. diaphoret.* and in the morning purged him with Rhubarb-drink, repeating this method once in 5 days: and on the intermitting days I gave him a scruple of *Dr. Walter Needham's pulv. antistrumat.* By this course the Child recovered, and was returned into the Country. Since that he hath frequently relapsed, and new *Strumæ* have arose: but by prosecuting the former method he hath recovered as often, and the *Strumæ* afterwards resolved, we scarce applying any thing to them.

6. Obser-
vat. of
Ophthal-
mia.

A young Gentleman of about 16 years of age was, after the Small-pox, afflicted with sore Eyes, with a *Pustula* in one of them; which not yielding to the common method of Purging, &c. I was consulted, and prescribed a *Fotus* and *Collyrium*, as in the state of fluxion; and by giving him 3 Doses of *Merc. dulcis* of 15 grains *per dosin*, in 10 days I cured him of his Distemper so perfectly, that it returned no more.

7. Obser-
vat. of
Ophthal-
mia.

A Child of about 8 years of age had been diseased two months with sharp Defluxions upon both her Eyes, with *Pustulae* and Excoriation of the Lids; she had also an *Oxana* and thick upper Lip chapt. I purged her with *syr. diascereos* in a draught of Whey in the morning, and some hours after sent her some astringent Emplasters to apply to her Temples and Forehead, prescribing the bathing her Eyes with Breast-milk mixed with *aqua plantag.* That night she took an anodyne Syrup in a draught of Mace-Ale, and slept with Sponges upon her Eyes dipt in the foresaid Liquor. The next morning I let her blood in the Arm 6 Ounces, and syring'd her Nostrils with *decoct. hordei & radic. althææ*, advising her to forbear picking her Nose. Her Lip was anointed with *unguent. tutiæ ad oculos*, with an addition of *Merc. præcipitat.* finely powdered. The next morning I gave her 12 gr. of *Merc. diaphoret.* and from that time purged her once in 5 days with *Calomel. in conf. rosar. damasc.* and caused her to be bathed the intermitting days. After I had cleansed her Nose of its crusty filth, I syringed it with this following Decoction: *R. fol. plantag. summitat. rubi, equiseti, an Mß. myrobolan. citr. ʒij. stor. ros. rub. Pj. pom. granat. num. j. contund. & coq. in aq. plantag. & ros. rub. an. ℥j. Colaturæ adde syr. diamoron. de ros. sicc. an. ʒjß. mellis Ægyptiaci ʒj. Misc. pro usu.* Her Eyes recover'd after the first bathing so well, that she was able to look upon the light, and in less than 14 days was perfectly recovered. But about a year and a half after she grew indisposed, and was seized with Convulsions. I purged her with *infus. senæ, rhab. &c.* and afterwards prescribed her three or four Doses of *Merc. dulcis*, and thereby freed her of those Convulsions.

8. Obser-
vat. of
Ophthal-
mia.

A Child aged about 6 years, of a weak tender Constitution, having been long subject to Defluxions upon his Eyes, Catarrhs, &c. was after several unsuccessful Attempts recommended to my care. I began with the making him a Fontanel in his Neck by Caustick. It had been made sixteen days before he knew of it, and then it was descried by the clinging of his Hair to the Plaster. From that time he grew froward with it, and in compliance with him it was healed up again 2 or 3 Months after. Having fixt the Fontanel, I began to purge him with an Infusion of Rhubarb in a small Ale, and gave him 6 grains of *Merc. diaphoret.* in a spoonful of White-bread and Milk, repeating this Powder and the Infusion of Rhubarb once in 4 or 5 days. So often as I designed larger Evacuation, I mixed a purging Syrup with the Rhubarb-drink: and the following night prescribed him a spoonful of the anodyne Syrup in Mace-Ale, or what else he best relish'd. A Pearl-Julep was made him of a distill'd Milk,

Milk, *cum aq. cinnam. hordeat.* & *sacchar. alb.* also a medicated Ale was prescribed him of *sarsaparill. lign. lentisc. santal. alb. passul. maj. enucleat. flor. salviae, beton. euphrasie, milleped. cort. citr. & nuc. moschat.* He was extream nice in taking any thing of Physick, so was for the most part cheated into it. He was also more shy in admitting of Topicks. Sometimes in extremity of pain in his Eyes Stupes were applied to them wrung out of a decoct. *flor. sambuci; cham. ros. rub. &c.* Collyria were more rarely applied: those that were used were *aq. pomor. dulc.* and sometimes other distill'd Waters wherein had been infused *troch. alb. Rhas. or sarcocoll. lap. tutia, saccharum.* The Water was filter'd clear. The Medicaments we laid the stress mainly on were, *infus. rhab. and pulv. Merc. diaphoret.* By which and the anodyne Syrup he was certainly relieved in his greatest extremity. He was frequently well three or four Months together, and at length hath in a great measure worn off the many Disturbances; yet, being of a tender Constitution, may be incident to Defluxion upon his Eyes: but he hath been hitherto certainly relieved, as I said by the aforesaid Prescriptions.

A young Woman about 23 years of age had many *Strumæ* on both sides of her Neck, down the length of the *Musculi mastoides*, some large, flat and round, others oval, of a different size: she had much pain in her Head, and was subject to a Catarrh. I purged her with *infus. senæ, rhab. cum syr. ros. cum agarico, &c.* and prescribed her a decoct. *sarsæ* with Antistrumaticks, also *Bezoard. mineral.* and purged her afterwards once in 5 days with *Calomel.* and *diagrid. cum. syr. de pomis magistral.* I fomented the Glands with decoct. *rhad. gladioli, cucumeris agrest. bryonæ, &c.* and mbrocated them with *ol. ex ped. bovin.* some time, and afterwards applied a *Malagma* of *Corn. Cels.* by which they dissolved very much, and she recovered good health. But about 6 Months after she came to me afflicted with a severe Defluxion in both her Eyes. I let her blood in the Arm 10 Ounces, and repeated the former course of Physick; then prescribed a lenient *Fotus*, and a *Collyrium ex mucilag. sem. psyllii, &c.* and let her blood in the other Arm 7 or 8 Ounces, applying *empl. e pice Burgund.* to her Neck, and Intercipients to her Temples: by which she recovered of the Defluxion in her Eyes, and by the use of a *Collyrium ex infus. croc. metal.* her Sight grew strong.

9. Observat. of Ophthalmia.

A young Gentlewoman came to London labouring under great Inflammation with a *Pustula* in her left Eye. She had also a *Struma* in her left Foot about the Instep, lying very hard and big amongst the Tendons. Dr. Prun. and Dr. Bate were her Physicians. She began her course of Physick with this Prescription; *Rx fol. senæ ʒvi. rhabarb. turbeth. an. ʒjß. hermodact. ʒj. salis tartari ʒj. flor. sambuci Pij, fiat Infus. in aq. scrophul. q. s. ad ʒvj. colat. adde syr. e pom. purg. mannæ Calabr. an. ʒjß. sumat ad quantit. cochl. vij. sing. matutin. cum debito regimine, augendo vel minuendo dosin, pro ratione operationis. Rx aq. scrophul. ʒij. syr. de meconio ʒß. sumat hora somni singul. noct. post purgationes.* This following Decoction was also prescribed: *Rx santal. alb. ʒjß. citr. & rub. an. ʒiij. ras. ebor. ʒj. regul. antimonii ʒij. sarsap. ʒv. infund. in aq. font. tbvj. deinde adde rad. rusci ʒiij. fol. millefol. agrimon. ling. cervinæ, an. Miiij. ciner. spong. combust. ʒvj. uvar. passul. enucleat. ʒvj. liquoritiæ ʒjß. aq. recent. tbij. coq. ad consumption. tertiæ partis, & fiat Colatura; adde mellis q. s. & clarificetur; bibat bis in die ad ʒiij. & etiam pro potu ordinario cum cerevis. ten. 2 part. in pastu. Rx pulv. milleped. ʒjß. ceruss. antimonii ʒvj. Merc. dulc. ʒij. Merc. vitæ gr. ij. pulv. cort. citr. condit. ʒjß. cons. euphrasie, beton. an. ʒij. syr. e cort. citr. q. s. fiat Electuar. Rx resine jalapii ʒß. amygd. j. Merc. dulc. ʒij. Merc. vitæ gr. ij. syr. e cort. citr. q. s. fiant Pilulæ num. xij. deaurat. sumat num. iij. summo mane superdormiendo.* This was repeated every sixth day. While she passed through this Course

10. Observat. of Ophthalmia.

of

of Physick, Fontanels were made under her Ears, and *Collyria* were applied *ex mucilag. sem. fenugraci, &c. in aq. & lacte*; also the Fomentation prescribed in the method of Cure, and *empl. ad herniam* upon the Temples and Forehead. The *Struma* upon the Foot I designed to have taken out by Incision: but I complied with their desires, and applied a Caustick the whole length of it, and divided the Escar; then with a Caustick-stone rubb'd into the body of the *Struma*, and dress'd it up with Lenients and *emplastrum è bolo*, with Bandage over it. After the Escar separated, I rubb'd deeper into the *Struma*, till I came near the *basis* of it: then, in consideration that it lay upon the *Periosteum*, I dress'd it with *Merc. præcipitat.* upon Dossils of Lint, till I had digested it all out: after which I left off the use of the Dossils, and suffered the Ulcer to incarn. By the application of a Pledgit spread with *unguent. basilic. mag.* it contracted close in few days, and cicatrized well. During the time I was curing her Foot, the Defluxions on her Eye remitted, and the Ulcer cured by *aq. lap. calam.* and she returned to her Friends. But I have of late heard that both her Eyes have been since frequently sore.

11. Observation of an Ophthalmia

A Child of about 4 years of age, having been long diseased with the *King's-Evil* from the one Ear to the other, with sore Eyes and a swelled upper Lip, was commended into my hands. The *Strumæ* were many of them ulcerated, and the Parts about them fretted and inflamed by the Matter which was pent in by gummy hot Plaisters which had been applied to them. His Head was also ulcerated under an Emplaister that had lain long upon it, and his Eyes almost blinded by the defluxion of a hot Rheum. By means of all which the Child was much emaciated. I dress'd the ulcerated *Strumæ* with Pledgits spread with *unguent. diapompholyg.* applying *cerat. Galeni* over them, and clipt the Plaister off his head; and after I had cleansed it of the crufted *Mucus* with which it was cover'd, I bathed it with Wine wherein were boiled *stor. ros. rub. summitat. absinth. balauft. nuc. cupress. & bacc. myrtill.* then bound a Compress dipt in the same upon it: by which in a day or two it dried up. To his Eyes I applied a fomentation, and an anodyne *Collyrium ex lacte mulier. & aq. ros.* was dropt into them. Emplaisters *ad herniam* were applied to his Temples: I embrocated his Lips with *unguent. refriger. Galeni.* I also prescribed him a distill'd Milk, with Antistrumatics, and purged him with Rhubarb-drink; also a few grains of *Merc. dulcis* once in three days: At other times he drank a distill'd Milk, Water with new Milk, and some nights an Emulsion *ex sem. 4 frig.* By this method his Eyes recovered, the Ulcerations healed, and at length the Glands resolved, by the use of the *Malagma ad strumas*, or suppurated, and wasted themselves that way, and he recovered flesh. But this Child was of an ill Habit of Body, and frequently relapsed or fell into other Diseases: the Cure of some of these indisposed Bodies being the work of Time.

12. Observation of an Ophthalmia.

A Child of about 11 years of age had been long diseased with Inflammations on her Eyes, with other disturbances from acid Humours. After various endeavours to cure her, she was at last with much despondency recommended into my hands. I applied Emplaisters *ad herniam* to her Temples, and prescribed her a Fomentation to breath forth the impacted Humours, and a Solution of *lap. calaminaris in aq. feniculi* to wash her Eyes. The next day I purged her with *infus. senæ rhab. &c.* and sent her half a dozen papers of a few grains of *Calomel. cum saccharo*, with directions to take one every 3, 4, or 5 days. From her very first Dose the Fluxion ceased, she recover'd, and continued so many Months, and is relieved thereby constantly. But lately she was seized with a pain in her right Ear, and many small *Strumæ* arose on both sides of her Neck, which I removed by Purging, and by embrocating it with *unguent. ad strumas.*

These

THESE Inflammations of the Eyes are generally attended with *Lippitudo*, and are called so by the *Latins*: but that which I here mean by it is, a Blearedness of the edges of the Eye-lids; of which there are two sorts, *Lippitudo humida*, and *sicca*. They are both the effects of great Defluxions excoriating the Lids, and relaxing the tone of them. The *Humida* is more remarkable upon Accidents of burning by Fire, Gun-powder, or the like: but that which I shall here speak of is, a *Lippitudo* with an *Hypersarcofis* which ariseth upon the excoriated Lid, and turneth it outward, being always accompanied with Fluxion upon the Eye. The *Lippitudo Sicca* is an Excoriation of the Lid, but ariseth from a salt Phlegm mixed with a bilious Humour, and lieth upon the *Cilia* amongst the Hair with a branny white Scale, not much unlike an *Elephantiasis*, and is attended with an itching. I shall give you an Instance of each.

A Man of about 56 years of age, of a full Body, had been subject to a *Lippitudo* of both Eyes some Months. I fomented them with *decoct. euphrasie, salviae, beton. flor. ros. rub. &c.* and after I had cleansed them of the *mucus*, I touched them daily with *unctur. vitrioli dulcificati* lightly, and prescribed him some of the *aq. viridis* set down in the Chapter of *Ægilops* to drop into his Eyes at other times: by which method he was cured.

A Man aged 28 years, of a tolerable good Habit of body, came to London with a *Lippitudo* on the lower Lid of his left Eye, over-grown with an *Hypersarcofis* arising from within, over-spreading the Tunicle, and heaving it outwards. Dr. Walter Needham was his Physician, and prepared his body by Purging, &c. In order to my work, I placed him in a Chair in a clear light, and turned the diseased Lid more outward, the while bringing the upper Lid close over the Eye, and holding it so whilst I rubb'd the *Hypersarcofis* with a Caustick-stone, wiping the Salts away as they dissolved with armed Probes. After I had thus extirpated the over-grown Flesh, I clipt off the loose Sloughs, and with a Sponge dipt in a Bason of water I washed the lixivial Salts out of the Escar, dropping into his Eye *mucilag. ex sem. althææ, psyllii & cydonior. extracta in aq. plantag.* then laying him upon his Back, I covered over the external parts with Whites of Eggs beaten with a piece of Allum to a Froth, and thereby restrained the Fluxion. After the Escar separated, I rubb'd the remaining Super-excrecence with a Vitriol-stone, washing the Salts out afterwards with fair Water. During this work he was let blood, and frequently wash'd his Eye with a Solution of *troch. alb. Rhasis* and *aq. plantag. & solani*. Thus in the space of three Months it was extirpated and cured, the Eye lid returning naturally as the other.

A Man of about 26 years of age, having been afflicted from his infancy with sore Eyes, consulted Sir Fra. Prunjean, who sent for me. The Patient had a certain Blearedness of both the left Eye-lids from the external *Canthus* downwards, but more especially on the lower Lid; which Blearedness was covered with small white branny Scales investing the Hair. His Physician purged him with an *infus. senæ, rhab. &c.* and prescribed a Fontanel behind that Ear, also Venæsection in that Arm, which was accordingly done. I fomented the diseased Parts with a Decoction of *summit. malvar. violar. flor. sambuci, meliloti, sem. lini & fenugræci*, and anointed them *cum ol. vitell. ovor.* at least twice a day. By this the dry Scales were suppled, and after pickt off from the Hair and edges of the Eye-lids. Then I touched the bleared edges with *aq. viridis*; and anointed them with *unguent. tutiæ*, as it is described in the *Pharmacopœia Londinensis*; by which and internal Prescriptions he was cured.

C H A P. VI.

Of Ægilops.

Names. *Ægilops* is a Tubercle in the inner *Canthus* of the Eye, either Scrophulous, Atheromatous, or of the nature of a *Meliceris*, or sometimes with Inflammation. It hath obtained two names amongst the *Grecians*: viz. *Anchylops*, when it is not ulcerated; *Ægilops*, when it is. In which latter case it is very apt to grow sinuous; and being so, whether it prove callous or not is however called *Fistula lacrymalis*, sometimes passing through the Bone of the Nose it self.

Causes. The Causes of *Ægilops* are the same that produce the like Tumours in other places. But in some cases it is made by Fluxion, and appeareth first as a small *Pblegmon*. This Disease frequently occurreth in *Lues Venerea*: but these I here treat of are Strumous.

Signs. If it be *Struma Atheroma*, &c. it is then made by Congestion, and the Tubercle is round, without discolouring the Skin. If it be made by Fluxion, pain and redness do appear, with Inflammation over all that Eye. Sometimes it beginneth only with a weeping of that corner, and is not discovered till it affects the Eye with redness, and then, by pressure with your finger upon that *Canthus*, a mixt Matter may be discharged, part whereof is not unlike the White of an Egg. Sometimes this Matter eateth quite through the Bone, and dischargeth it self downwards through the Nose with a foetid smell.

Prognostick. *Fistula Lacrymales* are difficult of Cure from what Cause soever they arise. The Part being loose and spongy, the Eye very sensible, and the laxity of the Part, maketh Humours apt to soak into it, and to penetrate even to the Bone it self. The sensibleness of the Eye renders it subject to pain and fluxion, as also unfit to be dressed with sharp Medicaments, such as these Diseases require.

That *Fistula* which is recent, with sufficient opening is the easiest of Cure. Those of a long continuance are for the most part accompanied with Ulcerations of that Gland, and *Caries* in the Bone, which makes them subject to a weeping after they are cured. If the Ulcer be accompanied with Erosion, it will be apt to terminate cancerous; in which case the Cure is deplorable.

Cure. The indication of Cure is taken from the condition of the *Ægilops*, whether it be in its beginning with Inflammation, or by Congestion, passing its Matter forth under the *Cilium* into the Eye: in which case it is fistulated. *Anchylops* hath also its peculiar way of treating, as other Tumours of the Glands.

In the beginning of *Ægilops* Bleeding by Lancet is necessary, and so is Purging, also such Alternatives as have been prescribed in the general Cure of *Struma*, with regulation of Diet accordingly.

Externally we apply Repellents to the diseased Part, to prevent Fluxion, of *aqua protulac. lactuca. plantag. equiseti. solani. sperm. ranar. &c. cum albumin. ovor. bola Armen. &c.* To intercept the Matter we apply *gum mastich. takamahaka. emplastr. ad herniam*, to the Temples and Parts about. If the Tumour increase with tension and pain, it will be then reasonable to endeavour Diffusion by Medicaments already described in *Ophthalmia*, of *summitat. absinth. flor. sambuci. rutæ. far. lentium. orobi. &c.* decocted in Wine or common Lixive. In the *Anchylops* rancid Nuts beaten and applied are much commended: so likewise is *calx viva cum melle contrita*. If the Tumour tend to Suppuration, then hasten Concoction *cum radic. lilior. mucilag. sem. althææ. fenugræci. lini. far. tritic. axung. porcin. &c.* The matter being well concocted, lay it

it open large, that you may have way to apply your Medicaments. Authors have proposed various Escaroticks to open these; but I use the opening them by Knife or Caustick. The only Caution is, that you open it such a distance off from the edge of the Eye-lid, that you divide not that; for in so doing you will leave a remediless Blemish, and the Eye will be apt to water ever after, and be subject to Fluxion. Therefore if you open it by Caustick, it will require your greater care. I for the most part open them by Incision. Then digest them with a Doffil dipt in *oleo ros. & vitell. ovi*; over which apply *cerat. Galeni*, or such like Anodynes, with a Compress dipt in some of the abovesaid distill'd Waters, to contemperate the heat in the Part; and afterwards deterge with *mel. ros. syr. de ros. siccis*; or, *R. mel. comm. ʒij. viridis æris ʒj. spir. vini ʒiiij. coquantur ad tertie partis consumptionem*: and then dispose them to cicatrize with this; *R. myrobalan. citr. ʒj. thuris, myrrhæ, an. ʒij. æris ʒj. camphoræ gr. ij. infund. in aq. ros. & vini albi an ʒiiij. & coquantur ad tertie partis consumptionem, filtrando pro usu*. And afterwards by *unguent. tutiæ, aq. calcis*, &c. with good Compression incarn and cicatrize them.

If it be Fistulous, and the Orifice small, dilate it with Gentian-roots, or such like, and proceed with Deterfives, as hath been seen. If thereby the *Callus* do not waste, you may inject this following Decoction: *R. fol. rutæ, chelidon. min. agrimon. an. Mss. infund. per noctem spir. vini ʒss. coletur pro usu*: and apply this following upon Doffils; *R. zinziberis ʒij. viridis æris ʒij. mell. ros. ʒiiij. aceti opt. ʒiiij. coq. ad crassitiem*. If there be *Caries*, apply this: *R. vitrioli usti cantharid. absciss. alis & capitibus, calcis vivæ, salis armoniac. alumin. rock. an. p. æq. cum urina pueri inspissat*. These are the Medicaments proposed by Authors of good Authority.

In the applying them the Parts about must be well defended, and the Fluxion restrained by the application of Refrigerants; and after all it is a most painful tedious way. Therefore I propose the use of the actual Caution; which being applied through a *Cannula* will with one touch waste the Callosity and *Caries*: after which dress it up with a Doffil dipt in a mixture of *ol. ros. cum albumine ovi*, and a Compress in the same over all: then digest and deterge with the Milder Prescriptions, keeping the Orifice dilated with a Doffil dipt in *tinctura myrrhæ*, &c. till the Bone exfoliate: then with *unguent. tutiæ*, &c. with Compression cicatrize.

The *Anchylops* requires Extirpation, and is to be cured accordingly to what is proposed in this Treatise.

A Young Gentlewoman, abounding with acid Serum, was seized with an Inflammation and Tumour in the great *Canthus* or Angle of her Eye. She had been dressed by some neighbouring Friend till the Inflammation closed up her Eye-lid, and alarm'd her by the great discharge of a mixt serous Matter. I, observing the Tumour perfectly suppurated, and the Matter shining under the *Cuticula* ready to burst through, open'd it by the point of a Lancet, without drawing one drop of blood. The Matter discharged, I dressed it with a Doffil dipt in *vitello ovi*, with a Plaister of *cerat. Galeni*, and Cloths dipt in Red Wine over all, with convenient Bandage to retain them on. The next day I took off the Dressings, and fomented it with *decoct. fol. malv. viol. beton. salviæ, & flor. ros. rub.* in Wine and Water, repeating the Dressings as before and let her blood in the Arm. At the next day's dressing I found the Swelling of her Eye-lid relaxed, and the external Inflammation mitigated, but the Eye it self inflamed. I fomented and dressed the Abscess with a Doffil dipt in *syr. de ros. siccis*, applying the Pledgit of *unguent. tutiæ* over it, with a soft Compress thereupon; leaving the Eye at liberty to be refreshed by the

1. Observation of Ægilops with Inflammation.

Air, and to be dressed with Breast-milk, &c. as they pleased. To the Fore-head Frontlets were applied to restrain and intercept the Influx. Sir Fra. Pruj. was her Physician, and prescribed her lenient Purgatives, traumatick Decoctions, &c. I also kept the Orifice open sufficiently for discharge of the Matter and conveniency of dressing, applying externally refrigerant and exsiccant Medicaments, and adding a few drops of *tinctura viridis* to the Syrup in which I dipt my Dossils. Yet notwithstanding our endeavours, the Matter having made its passage into the Eye during the time of Suppuration, it continued its course, and flowed both ways in too great a quantity for some time. Upon which consideration I dressed the Ulcer with a Dossil dipt in Præcipitate, and applied over it a Pledgit *cum unguent. tutiæ Vigonis*, with Compress and Bandage. After I had thus digested it, I dressed it with a Dossil dipt in *aq. viridis*, (as it is prescribed in the method of Cure,) lessening the said Dossil daily, and at last cicatrized it firm.

2. Obser-
var. of Æ-
gilops with
Inflamma-
tion.

A scrophulous Child of about 4 years of age having an inflamed Tubercle in the great Angle of her left Eye, the Matter being suppured, I opened it by Incision, and discharged a well concocted Matter; then fomented the Tumour with Wine, and fill'd the Abscess with Dossils dipt in *syr. de ros. sicc.* with a Pledgit of *unguent. basilic.* over it, also a Plaister of *Cerat. Galeni* over that, and bound it up, proceeding daily in the fomenting and dressing it, till the Inflammation and Swelling remitted. After which I added a few drops of *tinctura viridis* to the Syrup, and kept the Ulcer dilated with a Dossil dipt and pressed out of that Mixture, applying a Pledgit of *unguent. ex lap. calamin.* with a Compress and Bandage over it. And the better to dispose the Ulcer to cure, I purged her once in 4 or 5 days with an Infusion of Rubarb in Small-Beer, and once a week with a few grains of *Mer. dulc. cum saccharo*. The Matter diminishing, I lessened the Dossil, and cicatrized it with the aforesaid Tincture, making good Bandage upon the *Sinus* till it was close united, and ceased weeping.

3. Obser-
var. of Fi-
stula lacry-
malis.

A Gentlewoman of about 25 years of age having been between 3 and 4 years subject to the *King's Evil* and a *Fistula* weeping into the Eye from the great *Canthus*, I prescribed her *aq. lap. medicament. Crollii* to drop into that corner of her Eye, and directed her the making a constant Compression upon the external Parts by an Instrument made to that purpose; by which she was in few months cured. And by the same way, with the help of Internals, I have cured many of those, where the Bone hath not been carious, or the Habit of body extreamly indisposed.

4. Obser-
var. of Fi-
stula lacry-
malis.

A Boy about 7 or 8 years of age; of a very ill Habit of Body, had also been two years diseased with a *Fistula lacrymalis*, and consulted some of our Profession. But they deterred him and his Parents with the mention of the actual Cautey: whereupon he was put into my hands to cure. I made Incision into the Cavity, and put into it a proportionable piece of Gentian-root, with a Pledgit of *Basilicon* over it, and a Compress pressed out of some of the aforementioned distill'd Waters. The second day after I repeated the same manner of dressing, and continued to keep it dilated with some of the same Roots. During which I endeavoured to restrain the influx of Humours, and dry up those affecting the Part, according as hath been set down in the method of Cure, and by Antistromaticks disposed the Humours to a healing condition. The Fluxion being thus removed, and the Matter little, I left off the use of the Gentian-root, and dressed the Ulcer with Dossils dipt and pressed out of *aq. med. Crollii*, and after some days lessened them daily. Afterwards I left off the Dossils, and cicatrized the Ulcer with Pledgits of *unguent. tutiæ*, &c. Many such I have cured; but some years after I have seen divers of them thus cured weeping again.

A Girl of about 12 years of age having a *Fistula lacrymalis* of some years continuance, discharging a mixt crude Matter daily into the Eye, I laid it open by Incision, dilated and digested it, and endeavoured by Internals to dispose the Body to a better habit, and prosecuted the Cure by Exsiccants. But it not yielding thereto, I separated the *Periosteum* from the Bone, made Exfoliation of it, and incarned upon that, supposing I had by Compression cicatrized the Ulcer. But it brake out again upon the leaving off the Bandage; upon which I dilated it again, and by actual Cautey consumed the *Callus* and Bone after which it cured more easily.

A Gentlewoman aged about 38 years had a *Fistula lacrymalis* discharging its Matter into the Eye in great quantity. I applied a small Caustick upon that part of it where I felt the Cavity; and having eaten into it, I passed an actual Cautey through it to the Bone whereby I cauterized it, then dressed the burnt Escar with Lenients to hasten its Separation, and afterward deterged and cicatrized the Ulcer as hath been afore shewed.

A young fellow, aged 28 years, was commended to me out of the City, having a *Fistula lacrymalis* discharging a great quantity of purulent Matter into the Eye. He had suffered many years by it, and passed through many hands unsuccessfully. I laid it open by Incision, and dilated it, endeavouring some while to digest it, and to that purpose prescribed various Internals; but the Matter rather increasing, I passed a *Cannula* into the Cavity, and with an actual Cautey pierced through that side of the Bone of the Nose, thereby diverting the Matter, and afterwards cured the Ulcer with more ease; the Bone also exfoliated, and fill'd up with *Callus*.

I could give you more Instances of the Cures of *Fistula lacrymalis*; but the manner thereof differeth not from what hath before been said; and by the actual Cautey I never failed in the Cure of the worst of them.

A Woman aged about 30 years having a Tubercle in the great *Canthus* of the right Eye of the bigness of a Pistol-bullet, I made Incision of the Skin, and separating it from the preternatural body, I raised it up. In taking it out, the *Cystis* broke, and shewed it self by its Matter to be a *Meliceris*. I cleansed the Wound, and cut it out bringing away the *Cystis*; then closed up the Lips of the Wound, and applied a Pledgit of *unguent. basilic.* with Bandage over it, and cured it by Agglutination. These Tubercles do frequently yield to Discutients; and sometimes, after they have resisted all our Endeavours, they have of themselves resolved. Particularly I saw it in an Ensign in the *Low-Countries*, who was troubled with a Tubercle of the bigness of a Pigeon's Egg, which had been of many years continuance. He intended to have been my Patient there, and some years after designed to have put himself into my hands here: but a while after it dissipated so as there remained no mark of it.

A young Gentlewoman came to *London*, recommended to me, having a Tubercle in the great Angle of her right Eye, of the bigness of a Lupin. Many endeavours had been used in the Country to resolve it. I began with Discutients, bleeding, Purging, &c. and thought I had thereby dissipated the Matter: but after a few days discontinuance of Topicks and Bandage, it appeared again: upon sight whereof I opened it by Incision, and discharged a Matter like the White of an Egg. I could not perceive any *Cystis*, yet judged it an *Atheroma*. Having dressed it with a Doffil dipt in *Præcipitate*, I applied another over it spread with *basilicon*, with a compress over that dipt in *aq. ros. rub. & solani*. The third day I repeated the same kind of Dressings, and continued them till I had well deterged and digested the Ulcer; then dressed it with a Doffil dipt in a Sacrotick tincture of Myrrh, Aloes, &c. and afterwards proceeded with *Epuloticks*, and thought it had been cicatrized. But pressing with

5. Obser-
vat. of *Fis-
tula lacry-
malis.*

6. Obser-
vat. of *Fis-
tula lacry-
malis.*

7. Obser-
vat. of *Fis-
tula lacry-
malis.*

8. Obser-
vat. of *Æ-
chylops.*

9. Obser-
vat. of *An-
chylops.*

with my finger one day upon the upper part of it, and a disproportionate quantity of Matter flowing forth, I passed in my Probe, and feeling the Bone carious, I dilated it with Gentian-roots, passed in a *Cannula* to the *Caries*, and with an actual Caustery dried the Bone. I applied to it *ol. ros. cum albumine ovi*; and afterwards dressed the Ulcer daily for the first 4 or 5 days with *Dossils* dipt in *decoct. hordei, rad. consolid. maj.* and when the anguish was mitigated, with *tinctura myrrhæ*, keeping the Orifice open till the Exfoliation was perfected; then cicatrized it, as hath been shewed in the former Observations.

11. Observat.
vat. of *Ægilops*
with a *Polypus*.

A poor Woman came to me out of the Country with a large Tubercle on the right *Canthus*: she had also a *Polypus* in that Nostril. I began with the Tubercle by the application of a Caustick. After the separation of which a *Fungus* thrust forth, and grew very vexatious in the eradicating. After I had spent some time unsuccessfully in the work, I began with the *Polypus*, attempting to thrust it out with my finger: but it not yielding that way, I took hold of it with a *Forceps* Ducks bills, and having pulled it outward, I passed a Needle with a twisted brown Thred through it, according to *Fab. ab. Aquapend.* and pulling by that and my *Forceps* together, it came away about the length of two inches, but was attended with a flux of blood from the Nose, Mouth and Eye; which was stopt by the syringing up of *Oxycrate*. At the next dressing of the Ulcer in the *Canthus* I missed the *Fungus*, and found a great hole in the Bone of the Nose. Upon sight of which I concluded the *Fungus* which had been there was the root of that *Polypus*. The Bone was much corrupted: but I hastened the external Cure of the Ulcer, and returned her into the Country, leaving the Exfoliation of the Bone to Nature.

Having treated accidentally of a *Polypus*, I thought my self obliged to give you one Observation of an *Ozæna* it being an Ulcer within the Nose; and tho it be not the *King's Evil*, yet it too frequently accompanieth it, and is occasioned by those sharp Humours passing that way, and yieldeth not otherwise to Cure than by the general method prescribed in this Treatise.

11. Observat.
vat. of *Ozæna*.

A young Gentlewoman aged about 15 years, of a lean dry Constitution, was diseased with an *Ozæna* in both her Nostrils, a thick upper Lip, and some Glands on both sides her Neck. She was put into the hands of Dr. Barwick and my self. He prescribed her as followeth. *R. sen. oriental. ʒij. Rhei opt. incis. ʒβ. pulp. tamar. ʒβ. syr. è pom. purg. & mann. opt. an. ʒv. infund. S. A. in vini alb. ʒiiij. Colaturæ, clarificetur cum ovi album. & propinetur mane ad ʒiiij. cum regimine. Singulis noviluniis & pleniluniis sumat Calomel. gr. xij. diagryd. sulphurat. gr. vj. in formam Boli redact. cum conserv. viol. ʒβ. syr. viol. tantillo. R. ocul. cancror. Mercur. diaphoret. corall. rub. preparat. an gr. iij. Misc. Capiat bis vel ter quotidie in cochl. i. lact. vacc. cum asellis distillati, & superbibat cochl. v. vel vj. cum sacchar. opt. dulcorat.*

I began my work with the moistning of the crusted Matter sticking in her Nostrils, by frequent injecting of this: *R. bord. mundati ʒj. sem. althææ ʒiiij. sem. cucurbit. melon. excortic. an ʒβ. infund. & coquantur in aq. font. ad lb̄. coletur pro usu.* After her Nostrils were herewith syringed, she snuft up a little *ol. amygd. dulc.* Her upper Lip and Neck were embrocated with *unguent. ad strumas* morning and evening. After her Nostrils were freed of that crusty stuff, this following *Errhinum* was snuft up into her Nostrils twice a day at least: *R. fol. plantag. summitat. equiseti, an. Mj. rad. bistortæ, tormentillæ, an ʒj. flor. ros. rubr. M̄β. balauſt. ʒiiij. coquantur in aq. chalybeat. ad lb̄. Colaturæ adde syrup. nostris mag.* as it is prescribed in the Cure of *Ozæna* in the Treatise of *Lues Venerea*. The edges of her Nostrils were anointed with *unguent. refriger. Galeni cum ceruss. antimonii.* By the frequent repeating of the afore-mentioned internal Prescriptions and external Applications, she was happily cured in the

space

space of a Month, and so continues to this day. And by this method all these kind of *Ozæna* may be cured.

The Eye-lids are frequently diseased with glandulous Tubercles, which, how different Matter soever they contain, are generally called *Hordeoli*; and do take their original from the same Matter that those Tumours do which are described in this Treatise of *Strumæ*, and are cured after the same manner. Sometimes they resolve or suppurate; but for the most part they are taken out by Knife or Caustick. These only, that lie between the inner Tunicle and Cartilage are capable of being extirpated by Incision: the other may be eradicated by Caustick; the manner I shall shew you in a few Instances.

A Gentleman of about 26 years of age, had an *Hordeolum* on his right Eye-lid, lying between the external Tunicle and Cartilage. I applied *emplastrum ad strumas* on it, with hopes of resolving it: but after some time it suppurated. I thereupon opened it with a Lancet, and let out the Matter; then digested it with *unguent. Basilic.* But feeling afterward some part of the Gland in it, I sprinkled into it some *Merc. præcipit.* and applied a Pledgit of *Basilicon* over it, with *emplastr. diachyl. simpl.* whereby I eradicated it, and soon after healed it smooth with *unguent. tutie.* Where the Suppuration hath been more perfect, they are easier cured. In others, where they were hard and moveable, I have opened them by Incision transverse, or according to the length of the Eye-lid, and thrust them out whole, then healed them by Agglutination. Yet in some of these the *Cystis* hath burst in taking out, and a thick curdled Matter hath thrust forth: in which cases I digested them out with *Præcipitate*, and healed them as aforesaid. But the opening these with a Caustick-stone pointed is most grateful, to Women at least: upon which consideration I generally open them that way, and upon separation of the Escar thrust them out, and cure them by Digestion with little trouble or pain.

A young Woman came out of the North-Country to me with an *Hordeolum* on the inside of the Cartilage pressing upon the Eye with great weight, and inflaming it. I turned the Lid inside outward, made an Incision into it, and thrust it out: then cleansing the Wound, I returned the Lid down. It cured of it self in 3 or 4 days, without any manner of dressing. Yet sometimes Excrecences thrust out there, and inflamed the Eye. Sometimes I have seen Excrecences of soft Flesh grow upon the *Tunica conjunctiva*, and cause an Inflammation of the Eye. Several such like have come to me out of the Country: some I have cut away with Scissors; others I have worn off with the Allum and Vitriol-stone.

A Person of Honour, aged 29 years, was commended into my hands by Sir *Edward Alston*, Physician. She was diseased with a Tumour of a dark red colour possessing the upper Lid of her left Eye between the external Tunicle and the Cartilage, spreading to the very edge of the *Cilium*. I took its original from some *Hordeolum* ill handled, and seemed to be a *Sarcoma*. I proposed the eradicating it by Escarotick: which being allowed of, I encompassed the Tumour with Ink, then began with a Caustick-stone in the upper part of it, wiping up the dissolved Salt with armed Probes, proceeding gradually in the work to the very edge of the Lid, with great care to preserve the hair growing on it. It was a very nice work. After I had sufficiently penetrated into this fleshy Body, I washed the Salts out of the Escar, and scarifying it, dressed it with *unguent. basilic. cum oleo lilior.* and bound it up. The next day we met again; when I took off the Dressings, and found the Tumour flat, the Escar lying proportionably as was designed, and the Eye undisturbed. I fomented *cum decoct. malvæ, viol. &c.* and dressed it up as before, continuing my attendance daily with her Physician: and as the Escar separated between the Scarifications, I either

12. Observat. of *Hordeolum.*

13. Observat. of *Hordeolum.*

14. Observat. of *Sarcoma* upon the *Supercilia.*

either rubb'd the Super-excreſcence of Fleſh with the Vitriol-ſtone, or ſprinkled it with Præcipitate, or uſed both. And after the Eſcar caſt off, I deterged and waſted the remaining *bafis*, and cicatrized it ſmooth, leaving the very edge naturally ſhaped, without the loſs of one Hair, and ſo it continueth to this day.

15. Obſervation of an Excreſcence upon the lachrymal Gland.

An *Italian* Gentleman was brought to me by Sir *Theod. de Vo.* who had a large Excreſcence in the great Angle of his right Eye. The Extirpation had been attempted both in *Italy*, and at *Paris*, as they told me. I paſſed a Ligation upon the *bafis* of it, and clipt it off cloſe: then drying up the blood with a Sponge dipt in *aq. ſperm. ranar.* I rubb'd its remaining *bafis* with the Vitriol-ſtone, then waſhed his Eye again with the aforeſaid *aq. ſp. ranar.* The next morning I viſited him, and met his Phyſician there; but we ſaw nothing of the Excreſcence remaining, neither did it appear any more.

16. Obſervation of a *Thymus*.

A Gentlewoman near 40 years of age had a very large *Thymus* growing upon the ſide of her Noſe, over the great *Canthus*. It was of many years growth; and ſhe had been adviſed not to permit the Extirpation of it. But ſhe at length deſiring me to take it off, I paſſed a Needle under its *bafis*, and cut it out, cicatrizing it afterwards with Epuloticks, and it grew no more.

C H A P. VII.

Of the Tonfils.

THE *Tonfils*, or Almons of the Ears, are alſo frequently ſwelled in the *King's-Evil*; which Tumour may be very well reckoned a Species of it.

Theſe Swellings are raiſed by Congeſtion gradually without pain, and therefore are ſeldom taken notice of, till by their growth they bring inconveniencies with them, as Catarrh, Cough, or Difficulty of ſwallowing; in which latter caſe their Drink often runneth out at their Noſe.

Difference.

Theſe differ from the common Swellings of the *Amygdale*, as Tumours by Congeſtion do from thoſe made by Fluxion: which latter are of ſudden growth, and terminate as ſoon; whereas the other may have been many years growing, and do increaſe and decreaſe with the Moon, as generally all Tumours by Congeſtion in the Glands do.

Causes.

The *Causes* of the Tumefaction of theſe Glands are the ſame with thoſe of *Strume*.

Signs.

They are ſoft fleſhy Tumours, of a round or oval figure, retaining the natural colour of the Skin, and are of an obtuſe ſenſe, ſo that you may pierce the body of them with a Knife or Probe without cauſing pain or drawing blood: yet are they ſubject to Inflammation, and the like Accidents that other Swellings of the Glands are.

Prognostick.

If the Tumefaction be ſmall, the diſturbance is little; many people having had them from their Infancy without great inconvenience. If the Swellings be big, there may be danger of Suffocation: but in that caſe they may be extirpated without running any great hazard.

Cure.

In order to the *Cure*, Phyſicians do generally preſcribe Venæſection, and by Clyſters and lenient Purgatives make Evacuation; alſo by Blistering, Cupping, Fontanels, &c. they endeavour Derivation, which is neceſſary in caſe of Inflammation; in which aſtringent Lotions may be alſo proper. But in thoſe made by Congeſtion, the ſpeedieſt way of Cure is by Extirpation; and that either by Abſciſſion, at once cutting them off, or by actual or potential Caute-ry. Modern Writers have ſaid little of theſe Extirpations. *Fabritius ab Aquapend.*

Aquapend. in his Book *De operat. Chirurg.* renders the Abfciffion of them difficult enough, and not without danger, as you may fee, where delivering *Celsus* and *Paulus's* way of cutting them out, he determines at laft thus, *Ex quibus licet colligere, neque facilem neque omnino tutam hanc Chirurgiam eſſe, &c.* The firſt Chirurgion in my memory that attempted the Extirpating them, was the late deceaſed Mr. *Ed. Mol.* an excellent Operator. He attempted it upon a Perſon of Honour by actual Cautery through a *Cannula* well contrived for that purpoſe. I afterwards ſaw him burn ſeveral. He paſſed the Cautery through the body of them, and by repeating of it twice or thrice he burnt a hole through them, and accordingly crimped them up; as may be yet ſeen in that Noble Perſon, ſomewhat of the Excreſcence ſtill remaining, and not without ſome uneaſineſs at certain times: upon which account I had the honour to ſee it ſome years ſince. The way by potential Cautery is, by working with a Cauſtick-ſtone and other Eſcaroticks fix'd in ſuch an Inſtrument as may ſerve to eat into them, without offending the neighbouring ſound Parts. To which purpoſe I make my way into the body of the Gland, conſuming it within; and at laſt the Shell (or exterior parts) falls in pieces and is ſo radicated. The way by Excifion is, by making a Ligature about the *basis* of them, and ſnipping them cloſe off with a pair of crooked Probe-ſciſſors. In this work you ought to conſider well how they are radicated. For ſometimes they are rooted like a *Criſta* deeper in the Throat: in which, if in cutting them out you only cut that part you tied, and cut the Ligature at the ſame time, it will ſlip down into the Throat, and hazard their choaking. Therefore whiſt you hold the Ligature with one hand, you muſt paſs the ſciſſors down as cloſe by the *basis* of it as you can, ſo as by one ſnip you may cut it clear off. But leſt you ſhould fail, it will be neceſſary to have another Ligature fitted in an Inſtrument for your purpoſe, and the Patient's Head to be held ſteady, that in caſe you fail in the firſt attempt, and it fall into the Throat, you may readily return it, and tie it at the ſame time, which is no difficult thing to do. The Excifion made, the bleeding will ſoon be ſtopt by gargling with Oxycrate; and you may cicatrize it in a few days by touching it with the Vitriol and Alume-ſtones. I ſhall give you ſome Inſtances of my practice therein, and ſhew you my firſt attempt in the Extirpation of them by Eſcarotick and Excifion in this following Obſervation.

A Perſon of Honour, aged 10 years, having been ſome years diſeaſed with preter-natural Swellings in her Tonfils, with great Deſtuxion upon her Lungs, alſo Difficulty of breathing, and at laſt of ſwallowing, her Drink frequently running out at her Noſe, was brought to London, and put into the hands of Sir *Fra. Prujean* and Dr. *Luke Rugely*. Mr. *Arris* was Chirurgion to the Family. Various Remedies had been preſcribed, but they proving ineffectual to remove them, I was conſulted, and propoſed the Extirpation of them by actual Cautery. But that not being admitted, I undertook it by Eſcaroticks, and came the next day prepared, and placed her in a clear light, her head leaning to a Bed-poſt, Mr. *Arris* fitting behind, holding it ſteady. I began with the left Tonſil, holding her Tongue down with a *Speculum Linguae*, while I preſſed into the body of the Tumour with a long-pointed Cauſtick-ſtone fixed to a Stick. After I had held it a while, I pull'd it out, and with a Firr-ſtick dipt in *oleo vitrioli* preſſed into the ſame place, then pulled out that too, and gave her a Glaſs of water to waſh her Mouth, I repeated the uſe of the ſeveral Cauſticks; ſhe waſhing her Mouth always after the uſe of them. By this method I penetrated into both the Tonfils, and divided the left into two. In the time of working with the Cauſtick, I dried up the Salts of them with

1. Obſervation of the extirpation of both the Tonfils.

armed Probes so well, that her Mouth was not fretted in any part by them: and after I had finish't the work, I wash't the Tonsils with *decoct. hordei*, and she afterwards gargled with a pleasant Julep made of distill'd Water, *acet. ros.* and *syr. diamoron*. Having divided the one Tonsil, and diminished the other, I caus'd an Instrument to be made to convey a Ligature about the *basis* of them, with design to tie and cut them off one after another. I began with the left Tonsil, passing a Ligature upon the one half, and cut it off close. There happening no disturbance by bleeding, I tied the other, and cut it off: then with a Vitriol-stone I rubb'd the remaining *basis*, and thereby smoothened and cicatrized in 4 or 5 days: I then began with the right Tonsil. Mr. *Arris* holding her Head as formerly, I made a Ligature upon the *basis* of it, and holding the end of it with thy right hand, I pass'd a pair of Probe-Scissors with my other hand close by the said *basis*, and supposing I had encompassed the root, I clipt; but it not coming away, I thrust my Scissors downwards, and cut again, being confident I had clipt through the fleshy body. I pull'd the Ligature, but it not coming, I was somewhat surprized what should be the cause: therefore pulling my Scissors a little back, and turning them more off from the *basis*, I clipt again, cut off the bigger part of it, and brought it out with my Ligature: at which instant she choaked. The Ladies seeing it shrieked, and became troublesome. I desired Mr. *Arris* to sit still while the Patient choaked: she gaping, I pass'd into her Throat the Instrument I had made the Ligature by, and raising up the remaining Excrecence, she recovered, and cried, Shall I live? I replied, Yes, if you sit still. I pass'd another Instrument fitted with a Ligature. In changing the Instruments the Excrecence slipt down, and she choaked again, but I raised it up and relieved her: then tied the Ligature upon it, and looked into her Throat, where I saw it rooted like a Cock's Comb, and that in endeavouring to cut the Tonsil close by the root, I had cut below the part I had tied. Which if I could have foreseen, and have pass'd my Scissors close a little lower, one snip had brought it clear away; but not supposing it rooted so low, and working blind-fold, I was at a loss. But being now better informed, I pass'd my crooked Probe-scissors down lower, cut it clean off by the roots, and brought it away with my Ligature. I cicatrized it with the Vitriol and Alume-stones in few days. Yet some while after she was cured, a part of her Drink came out of her Nose; which happened by reason of the Tonsils drawing that part of her Palate down lower than naturally it should; and I suppose that was the cause of her speaking so. But some while after, she was freed of those Inconveniencies.

2. Observat. of the right Tonsil extirpated.

A Gentleman aged 25 years, who had been long subject to Defluxions, &c. from over-grown Tonsils, and taken much Physick unsuccessfully, was recommended to me. The right Tonsil being very large, I propos'd the cutting it off. The Patient's Friends consult'd their Physician and Chirurgion: they did not really assent to it. But notwithstanding, the Patient and his Friends perceiving there was no other way of Cure, they recommended him again to my care. I made a Ligature upon it, with design to have cut it off at that instant; but observing their great apprehensions of a Flux of blood, &c. I deferred it till the next morning, and then I saw it shrunk and much lessened. I took hold of the Ligature with one hand, and passing my Probe-scissors close by the root of it, at one snip cut it off, and brought it away with the Ligature, it scarce bleeding one jot. I rubb'd the remaining *basis* with a Vitriol-stone, and caus'd him afterwards to gargle with *decoct. hordei cum syr. de rosif. siccis*, and in 4 or 5 days cicatrized it. The other being small, I deferred the meddling with it till there should appear more cause. But from that time he recovered a better health.

A Gen-

A Gentleman's Daughter of about twelve years of age, frequently diseased with Catarrhs, and after some time with great Difficulty in swallowing, consulted me. Looking in her Throat, and seeing her Tonfils, especially the right, very big, I advised the cutting of the bigger. To which they assenting, I made a Ligature upon it, and at the same instant cut it off; and afterwards, by rubbing it with the Vitriol-stone, cicatrized it in few days. She being relieved thereby, hath hitherto deferred the cutting off the other.

3. Observat. of the right Tonsil extirpated.

A Gentlewoman of about 26 years of age, subject to Catarrhs, by reason of the preternatural growth of the *Amygdala* came to London, and consulted her Physician. He advised her to have them cut off, and brought me to her. I made a Ligature upon the one, and cut it off, washing her Mouth after with Oxycrate: then passed a Ligature upon the other, and cut it also off; she gargled and washed her Mouth. I afterwards rubb'd the *basis* of them with a Vitriol-stone, and took my leave for that time. The next day I came again, with intention to dress the remaining Wounds: but she was removed from her Lodgings, or her Physician had undertaken the cicatrizing them; for from that time I neither saw nor heard from her.

4. Observat. of both the Tonsils extirpated.

A Gentlewoman aged 56 years had been a long while subject to Defluxions upon her Throat and Breast. After various Endeavours to divert this Humour I was consulted. Looking into her Mouth, I saw the left Tonsil very large, and supposed that the cause of her Catarrh. I proposed the Excision of it: which being approved of, I came the next day, and made a Ligature about its root, and with my Probe-scissors cut through it, as was accustomed. But it not coming away as it should, and the blood flowing down her Throat whilst she leaned her Head backwards, feeling her self choaking, she flung backwards, thrust away the man behind her, and in struggling slipt off the Chair. At which instant I lost my hold of the Ligature, and she lay choaking. I saw the cause, and getting hold again of the Ligature, relieved her, then raised her up, and having a little refreshed her with Drink, placed her again in a clear light, and passing my Scissors down lower, with one snip cut it off, and brought it away with the Ligature. She gargled with Oxycrate, and was in few days cured by touching it with the Vitriol and Alume-stones. Since that time she hath not been troubled with Defluxions, but enjoys a good health to this day.

5. Observat. of the left Tonsil extirpated.

A young Gentlewoman of about 15 years of age was brought to me out of a neighbouring Village with both her Tonfils preternaturally swelled. She had been long subject to a Catarrh, and had been frequently in danger of strangling in the night with the Fluxion. I proposed the Excision of them, as the speediest way and least painful: but she not permitting it, I went about the Extirpation of them with Caustick stones and *ol. vitrioli* interchangeably used. I began with the right side, which was the lesser Tonsil, and prest my Caustick to the middle of it: then pulling it out, I prest upon the same place with a Stick dipt in *oleo vitrioli*: And so applied them interchangeably, (as I said.) Between while she gargled with Water, and took a breathing-time. Then I proceeded again in the work with Causticks. But it is not imaginable what a disturbance I met with from a frothy *Saliva* filling her Mouth the while to the very choaking of her. I wondred at it, but was told by her Mother then standing by her, that it was her Disease; and upon that account they had been directed to me as their last Refuge. At that sitting I penetrated into the body of the Gland, and eat it hollow, not unlike a worm eaten Nut. Having wearied her and my self, I washed out the Salts, and dismissed her. The next day she came again with it much diminished; the middle of it had been consumed, and the shell was contracted. I fell to work on the fore-part near its *basis*, and easily penetrating through the external

6. Observat. of both Tonsils extirpated.

nal part, worked down the edges afore me, and in three or four sittings wasted the Gland so, that there remained only a Prominency in the *basis*, which being raw, I consumed it by touching it with the Vitriol-stone daily; to which purpose I have them also fitted in Shafts, so as they cannot slip out, tho' they should break in the use. Whilst this latter was cicatrizing, I began with the bigger on the left side, after the same manner as hath been said of the former. But the work growing tedious by reason of the continual flowing of that spumous Humour, I concluded the Extirpation of that by Ligature and Scissors, and cicatrizing it with the Vitriol and Alume-stones, dismissed her cured. Since which I have seen her often, and am satisfied that she is freed of the former Disturbances by the extirpation of those preternatural bodies.

7. Obser-
var. of
both Ton-
sils.

A young Gentlewoman of about sixteen years of age, nearly related to a neighbouring Physician, came out of the Country diseased as in the former Observation, with much the like Accidents of Catarrh, &c. attending. In viewing these Tonsils, observing some little Porosity in them, I made search, and did easily pass in a small Probe, without drawing any blood or causing pain. They were perfect *Fungi*, and required to be eradicated. I would have done it by Ligature and Scissors: but it not being admitted, I proceeded by Caustick, as aforesaid; and not meeting with that disturbance from the *Saliva* as in the former work, I went on more easily, and the sooner extirpated them. Since when she hath been freed of the foresaid Disturbances, and enjoys a good health.

There also happeneth an Elongation of the *Uvula* through the abundance of salivous Humour flowing upon it: in which case, if it touch upon the root of the Tongue or upon the *Epiglottis*, it causeth a frequent hauking, and in progress maketh a vexatious Catarrh.

8 Obser-
vat.

Such was the case of a Servant-maid to a Noble Lady in the Country. Various Medicaments had been prescribed ineffectually: I being in that Family was desired to see her. Looking into her Mouth, I saw the *Uvula* hang dangling upon the root of the Tongue. It was not swelled nor inflamed. I supposing it the cause of her Distemper, took hold of the lower part of it with my *Forceps*, and at the same time cut it shorter with a pair of Scissors. It did not bleed a spoonful, and afterwards it cicatrized of it self without application of any kind of Medicament, and she was thereby freed of the Defluxion. Such another I cut off in a Servant of his *Majesty* belonging to *Hampton-Court*, and some others who were so afflicted, and thereby freed them of their Catarrh, when all other Remedies failed.

C H A P. VIII.

Of Ranula.

Descrip-
tion.

Ranula is a soft Swelling possessing those Salivals under the Tongue. It is made by Congestion, and in its progress filleth up the space between the Jaws, and maketh a Tumour externally under the Chin.

Causes.

It is caused by a pituitous Matter (say Authors) *è Cerebro in Linguam prolapsa*. But late discovery hath made it manifest to arise from a congestion of Humour in the inferiour salival Gland which is seated there, as I have already intimated.

Sigus.

It is a soft Tumour without pain or alteration of colour in the Skin. It yieldeth to the impression of your fingers, but riseth upon the taking them off, and containeth a Matter not unlike the White of an Egg, or such as we meet with in an *Atheroma*. It is also discovered by a Croaking in their Speech.

Prognos-
tick.

They are not dangerous as to life, but are difficult of Cure.

The

The Cure consisteth in the prosecuting the same method which hath been ^{Cure.} proposed in the Cure of *Strumæ*. The Topicks ought to be discutient; amongst which all the sorts of Salts and Aromatics dissolved in convenient Liquors are proper to hold in their Mouths: viz. *R. piperis, zinziberis, an. 3j. sal. commun. & gemmæ an. ʒij. origani, calaminth. rad. ireos, hermodact. an. 3ß. mastich. ʒj. Misc. & fiat Pulvis.* These may be boiled in Wine, or mixt with Oxy-mel; or the Tumour may be rubb'd with the Powder. To the external Tumour you may apply such Discutients as have been prescribed for *Strumæ*. If by these Applications the *Ranula* do not discuss, you must open it by actual Cautery, and dress it as shall be shewed in the follow Observations.

A Gentlewoman aged 35 years came to me recommended by Sir Fr. Prnj. ^{1. Observat. of Ranula.} She had a large Tumour lying between her Jaws under the Tongue, and reaching to her fore Teeth, making a great Swelling externally under the Chin. It caused a croaking in her Speech, and seemed troublesome to her. She had passed through a Course of Physick, and used various Medicaments to it unsuccessfully. I proposed the letting out the Matter by actual Cautery; but she not permitting it, I opened it by making an Incision on each side near the Tongue, and discharged about two Blood-Porringers full of an albugineous Matter; upon which the Tumour sunk. I then made a search with a Probe, and perceived the Matter had not only made a deep Cavity downward, but also rendred all the inner part of the Tongue hollow. I dressed the Abscess with *syrup. de ros. siccis*, and applied *empl. ad herniam* with a third part of *empl. Caesaris* externally under the Chin; deterging it afterwards with a Solution of *mel Egyptiac. in decoct. salviae, beton. apii, &c.* then incarned and cicatrized it. But some while after it rose again in a Tumour as formerly. Upon sight whereof I opened it by actual Cautery on both sides of the *Ranula*, by which the Matter was again discharged, and the Tumour wasted. During the time I was endeavouring the Cure, she was purged, and put into an Antistrumatal course of Physick, and was at last cured as above-said. Whether she relapsed afterwards I know not, having neither seen nor heard of her from that time to this.

An old Gentlewoman came out of the Country to me with a long Swelling ^{2. Observat. of Ranula.} on each side under her Tongue, of a fleshy colour, which felt under my fingers like the Gills of a Fish. They were not painful, but very uneasy to her. I supposed them to have Matter in them, and attempted to shrink and dry it up, as hath been proposed in the method of Cure; but without Success. I then slit the one open the whole length; but there flowed out only a florid blood, which I stopt by washing her Mouth *cum aceto*: then laid open the Tumour on the other side. They cut like cartilaginous bodies. I stopt the bleeding of this like as I had done the other, and dressed them both with an armed Probe dipt in *tinctura vitrioli dulcificati*, designing to dry them up that way. From the time I opened them, she complained of Hairs in her Mouth, and frequently endeavoured with her fingers to pull them out, and perswaded me to do the like: but could feel no such thing. She came to me daily to be dressed. The Abscesses digested, but the Tumours would not sink: wherefore I cut off their Lips; yet they did not lie so smooth as I designed. Upon which consideration I would have burnt them by actual Cautery: but the mention of that so terrified her, that she came no more to me. I have inserted this Case for the rarity of it, and am confident the actual Cautery was the proper and certain way of cure.

A young fellow was commended to my hands who had a painful Tubercle ^{3. Observat. of Ranula.} in his Tongue. I made Incision into it according to its length, and thrust out a Stone bigger than a small Olive. I dress the Abscess with *syr. de ros. siccis*, and thereby cured it in few days:
A T R E A-

A
T R E A T I S E
O F
W O U N D S.

The Fifth Book.

C H A P. I.

Of WOUNDS in General.

A Wound
defined.

A WOUND is a Solution of continuity in any Part of the Body suddenly made, by any thing that cuts or tears, with a division of the Skin.

This *Definition* differs much from what is usually delivered by Authors; and it is fit it should. For they generally defining a Wound by a Solution in *parte molli*, do thereby exclude a Cut made into a Bone, as that into the *Cranium* by a Pole-axe, &c. which why it should not be called a Wound I know not. I say, it is made by any thing that cuts or tears. Other Authors define it to be made by an external Instrument, &c. How then do they call that *fracturam cum vulnere*, a Fracture with a Wound, where the Bone from within makes the Wound, and thrusts it self quite through the Flesh? *Sennertus* adds to his Definition, that it be done *à re secante & acuta*: yet he reckons those for Wounds that are made by Bullets, although it be a Cannon-shot. I do therefore think it fit to make my Definition more comprehensive, and to take in whatsoever makes a sudden Solution of continuity, at least immediately and by it self, on what Part soever it lighteth. So a Cut into a Bone is a Wound: Tearing the Flesh, Nerve, Sinew, Tendon or Cartilage, by Bullet, Stone, Splinter, &c. is a Wound. Only I add this restriction, that the Skin must be likewise divided: by which last words I exclude Fractures that come not through the Skin, and Contusions if the exterior Parts be continuous. But by the word *Skin* I understand not only the external *Cutis*, but also the inward Membranes of the Gullet, Ventricle, Guts, Bladder, *Urethra*, and Womb; all which are capable of Wounds from sharp Instruments, either swallowed, or thrust into them.

Difference of
Wounds.

A Wound thus defined admits of many *Differences*, of which I know none that can be properly called essential. Great or small, deep or shallow, wide or narrow, straight or crooked, round or angular, are but accidental Differences. Distinctions taken from the Weapons, whether sharp or blunt, Sword, Rapier, or Bullet, Cut, Prick, or Tearing, are likewise but accidental. Those that look most like essential Differences are they which are taken from the Subject in which the Wound (which is it self but an Accident) inhereth, viz. from the Flesh, Skin, Brain, Nerve, Tendon, Artery, Vein, Gristle, Bone, &c. All which, being the several Subjects of Wounds, may well be allowed to specify them

them; and so much the rather, because from the nature of them we raise our greatest Indications of altering the method of Cure: To this Head may likewise be referred the division of them into Simple, or Compound.

Wounds are in themselves so visible, that they need no general Marks to be known by. But the peculiar affections of the particular Parts hurt, and the methods of discovering what inward Part is wounded, by observation made of the Symptoms that happen, are fully handled in those Chapters which treat of the Wounds of the several Parts.

The *Prognosticks* are there also delivered, that the young Chirurgeon may be informed how to make judgment of them, and avoid the engaging himself in promising a Cure of such wounds as are mortal. The greater Symptoms of *Gangrena*, *Paralysis*, and *Spasmus*, I have translated to *Gun-shot wounds*, they being there more frequent and usual: *Hæmorrhagie* are spoken of in this present Treatise.

The wound being a Solution of continuity, doth require to be made one again, Unity being the perfection of whatsoever hath a being. To effect this is the work of Nature and Art; both must mutually joyn their helping hands: and unless both the vital Faculties and nourishment of the Part do assist the Art of the Chirurgeon, it will be lost labour: here must be a joynt meeting and agreement of all in one.

In Simple Wounds the Chirurgeon is to afford his assistance five manner of ways; the omitting of any of which will render him negligent or ignorant in his Trade.

The first is, in careful and diligent taking away all such extraneous Bodies as by their interposition may hinder the true Agglutination of the disjoyned Parts, whether they be concrete Blood, Hair, Sand, Dust, pieces of Bones, Cartilages, or pieces of the Weapons, Rags, &c.

The second is, in bringing the Lips of the Wound even together, which were separated.

The third is, in retaining the Lips so brought together, that they may by Consolidation be restored to their former figure.

The fourth is, in conserving the Temperament and natural Heat of the Part, in order to Union.

The fifth is, in preventing ill Accidents, and correcting such as have already seized on the Part.

Thus much is required if the Wound be only Simple: but if it be a Compound Wound, with loss of Substance, or Contusion: then he hath somewhat more to do. As where there is loss of Substance, there he must assist Nature with his Sarcoticks, for regaining what is lost: and where there is Contusion, there he must endeavour the turning what is contused into Pus, or Matter, which must be performed before there can possibly be any Reunion.

As long as there is any strange body or different substance to keep off the Union, you must not hope to make any Cure of a Wound. Therefore if any such be to be drawn forth, before you attempt it, consider seriously, first, whether it can be done or no; secondly, whether safely.

For, first, sometimes the Weapon sticketh so fast, that by no art it can be extracted. Then it is of necessity to be left to Nature, who in this case sometimes worketh Miracles. For I have known pieces of Splinters, &c. sometimes stick so fast in the inward Parts, or to have been so inclosed, that we could by no means get them out: yet at length, upon Apostemation of the Part, they have thrust forth.

Secondly, you are to consider whether you may with safety pluck out the Weapon or no. Some will live a day with the Weapon in their Body, who would

Signs.

Prognosticks.

Intentions of Cure.

What is required in compound and contused Wounds.

The first Intention, in taking out extraneous bodies.

would expire upon the moment of Extraction. But if your judgment suggest to you that the Patient is recoverable, make hast, out with it before the Part be inflamed.

Which way the Weapon is to be drawn out.

If the Weapon have pierced deep, and through great Vessels in Nervous places; or if the Part opposite to it be full of Veins, Arteries and Nerves, or have a Bone lying in the way, or over against the Wound; if there be no great fear of Laceration, pull it out the same way it went in. For the Effecting of which, our Masters have left us variety of Instruments, the Figure and Use whereof you may see in *Scultetus*. But if the Point of the Weapon have pierced above half way through the Member, and there be no Bones nor notable Vessels to hinder you, (here is use of your Anatomy and exact knowledge of the Parts,) either thrust the Weapon through, or make way for it by Incision on the contrary side: but beware the Weapon be not too big, lest you do make two large Wounds for one.

Weapons stuck in a Bone.

If the Weapon stick in the Bone, move it up and down to loosen its Point, and then pluck it out: but in case it will not move, cut away the Bone before you extract it.

Weapons stuck between the Joynts.

If a Weapon be fastened betwixt two Joynts, make an Extension of the Parts both ways, as it is the manner in Fractures and Dislocations, that so the Tendons and Ligaments being stretched, the Weapon may with more ease come out. But do this with moderation, lest you break some notable Vessels, and a Flux of blood or some ill Accident befall you in your extracting it. It will be necessary in this work, that you consider the position the Part was in when the Wound was inflicted. *Gesner* hath a Story, in his *Observat. de Chirurgia dignitate & prestantia*, of a Chirurgeon, who when he could by no means get forth an Arrow, asked the wounded Patient in what posture of his Body he received the Wound. Understanding it was done on Horseback, he placed him in a riding posture, and immediately drew out the Weapon.

Weapons stuck in the Wound.

The Weapon thus drawn out, cleanse it from Rags or ought else, and permit the Wound to bleed, accordingly as you in your judgment shall think fit, still having respect to the Constitution and Habit of Body, that what is in the small Veins cut asunder may flow ought, as well to hinder Inflammation, as the Generation of much Matter. The Bleeding staid, if there be Hair growing about the Wound, shave it off: then wipe away the clotted Blood with a Sponge dipt in Red Wine, Oxycrate, or Water. But if it stick deep in the Wound, be not too busie with your armed Probe, for thereby you may stir up a new Bleeding; whereas this concreted Blood keeps the Wound warm, and defends it from the outward Air; and by digestion Nature will thrust it forth.

The second Intention, in making Union.

The second Intention is performed by bringing the Lips of the Wound exactly together.

This Intention is delivered in a few words, but they are to be observed as a Law; for without that Reduction of the Lips, a slow and deformed Healing follows. Nature hath nothing to do here in bringing the Lips together, that is the sole work of the Chirurgeon; who must not lay a Pledgit, or croud a Dossil of Lint or Tent into a little Wound: no, that is the way to keep the Wound open, and make it painful, whereby Defluxions are stirred up, the Temperament of the Part weakened, and the Cure prolonged; contrary to the intention of all who have writ of Wounds, and to the practice of our knowing Chirurgeons here. Yet amongst the Pretenders to that Art we often meet with such work. As for instance:

Observation concerning Dossils in simple Wounds.

A Young man was wounded near *Highgate* in the Back, slanting under the right *Scapula*; he had another Wound also on the Back, and another thro' the upper part of the left Shoulder, with a long Gash over the Forehead, and others

thers besides, some whereof were not considerable. The next day being carried thither to dress these Wounds, I found them all distended with Tents and Dressings of Lint, disposed to inflame and swell, and the Patient exceeding full of pain. After I had taken out these extraneous Bodies, my endeavour was to dress them so, as I might incline their upheaved Lips to return to their natural site. To which purpose I fomented them with Milk, and applied Pledgits spread with a Digestive *ex terebinth. cum vitell. ovi*, embrocating them with *ol. ros.* then by *empl. è bolo*, and Bandage with gentle Compression, I dressed him up; and afterwards here in Town cured him by Sarcoticks and Epuloticks, as in Compound Wounds; a longer work, which at first ought to have been done by Agglutination. Parts separated and disjoyned are to be Brought together gently and equally, that they may touch one another, and so be prepared for Union.

This must be done (I say) first gently; *sensim & sensim*, as *Fallopins* hath it, by little and little; not hastily at one pluck. If the Parts be equally soft, bring them equally together: if the one soft, the other hard, and not to be moved but with difficulty, bring the soft part to the stubborn. If the Parts be grown stiff with cold, as when the party hath been left in the field all night, which after a Battel hath often happened, (and particularly to a merry fellow, a common Souldier, that used to wear an iron Scull under a Cap, and from thence was called by a Nick-name; his Wounds were large, and the Lips hardened with the cold, and it was well for him, his Bleeding being thereby stayed;) in this case you are to supple them by fomenting them with Milk or warm Water, or else embrocate them with Oil, till you perceive the Lips made soft enough for your purpose, before you endeavour Re-union.

Union to be effected first, gently:

Secondly, *equally*, that the parts cut asunder may answer one another, as well in the top as the bottom, brim to brim, and, if possible, underneath Vessel to Vessel; that Nature may be in a capacity of doing its own work, and by vertue of its Balsam re-unite, agglutinate, consolidate, and heal the Wounds: in all which Intentions she is the Agent, and the Chirurgion only the Assistant. Which Assistance that it may be the more effectually given, we must go on to the Third.

Secondly, equally.

The third Intention is, Deligation, or retaining the Parts so joyned together. For the effecting of this, our famous Masters have left us two principal means, *Fasciæ* and *Suture*, Rowling and Stitching: to which some, nay most of them, added *Fibulas*, or Clasps. But I will not put you upon that. If the Wound be small, and in a Flethy part, and according to the length of the Fibres or Member, you may perform the Cure by *Bandage*; for here Nature will truly act her part, by application of blood and nourishment to both sides indifferently, and finish the *Coalitus* without your farther assistance. And this is that which gives such credit to the Sympathetick Powder. In the application of this, it becomes every Chirurgion to be much experienced, in respect of the unspeakable commodities which the whole Art receiveth thereby.

The third Intention, in retaining the parts united.

Bandage.

By Bandage not only are Parts dextrously accommodated for Union; but such also as would unnaturally grow together are kept asunder. In Burnings, Scaldings, &c. the Fingers would many times grow together, the Chin would grow to the Breast, the Arms to the Sides, were they not this way hindered. By them are Fluxes averted, and the delapse of Humours into the inferiour Parts forbidden; and, being already lodged, they are prest out. By these are good Juices advantageously forced into Parts emaciated. As, if the right Arm pine away, rowl up the left from the Hand to the Arm-pit, that the Blood being prest out into the *Vena cava*, or rather hindered to flow in so fast by the Artery, may with more eagerness flow into the other side, where it was wanting. By these we see great Fluxes of Blood, large *Hæmorrhagiæ* every day

Their use.

stayed.

stayed. By them are ill-shaped Wounds brought into better figures, and made more apt to be cured. By them is the force of your Applications helpt and furthered, they keeping them close to their proper places, where your care hath bestowed them. By them is the true natural form and beauty of the Part commonly preserved.

Three
sorts of
especial
use.

Three especial sorts of Fascitation or Rowling, pertaining to our present work, have the Worthies of our Profession commended to posterity. The first they term *Incarnatatrix* or *Agglutinatrix*, the Incarnative or Agglutinative: the second, *Retentrix*, or Retentive: the third, *Expultrix*, or Expulsive.

1. Incarnative.

The *Incarnative* is that which brings the Lips of the Wound together, and conserveth them in their right figure. It must be more strict than the Retentive, and more loose than the Expulsive; and is the most useful in simple, fresh, and yet bleeding Wounds. The manner of performing it is thus.

Having in readines a Rowler of such matter, length and breadth as I shall anon shew you; rowl it up at both ends firmly to the middle; then lay the middle part of the rowl on that part which is opposite to the Wound, to prevent pain and inflammation. You are then, after you have made a turn upon the Wound with both ends of the Rowler, to go up with the one, and down with the other, and take so many turns about the Part as may be requisite for the restraining the Flux of blood, or, according to the Season of the year, to defend it from cold, and yet not keep the Wound too hot, for that may weaken the Part. You must also be careful that your Bandage be not too hard, so as to intercept the Spirits. Your Rowler running downwards will press out the Matter from the affected Part, and by passing upward hinder the influx of Humours.

2. Retentive.

The *Fascia Retentrix* is used to keep your Dressings on close about the Wound. They for the most part are only of use in Wounds of the Head. There must be a moderation in binding with this Bandage.

3. Expulsive.

Fascia Expulsiva is performed by a Rowler of one hand: the special use of it is, to expel Matter out of *Fistula's* or Sinuous Ulcers; as also to prevent the descent of Humours, and to expel such as have already seated themselves upon the Part wounded or otherwise. Do it in the manner following.

How hard
to bind.

Begin in the sound part, beneath the seat of the Humours, and rowl upward pretty streight at first, and by degrees; as you come nearer the Mouth of the Wound, gentlier and gentlier. If you will press out the Matter contained in the Cavity of the Wound, you must rowl loosely there a turn or two, then harder, and yet a little streighter, the higher you go, to hinder the descent of Humours; but not too hard, for fear of harm. *Terminus sit bona laborantis tolerantia*; Celsus: Let it be made with such moderation, as the Patient may well endure it. *Hippocrates de Offic. Medic. Vinculorum aliud per se* (saith he) *remedio est, aliud iis quæ remedio sunt subservit*: Amongst Ligatures, some of themselves are Remedies, others are servants to Remedies. And true it is in these: for the Incarnative and Expulsive are in themselves, as you may perceive, Remedies, and the Retentive the common servant to them all.

Four other
Bandages
added by
Fallopins.

To these Fallopius, in *Tract. de Vulneribus in genere*, adds four more, viz. 1. *Fasciam disjunctionis*, 2. *Fasciam directionis*, 3. *Fasciam facientem Apostema*, 4. *Fasciam prohibentem Apostema*.

1. *Fascia disjunctionis*. By this Rowling Parts are kept from joyning together, as the Fingers when they are bared of the *Cutis*.

2. *Fascia directionis*, is that which assisteth in making a crooked Part straight, or bendeth a Part unnaturally straight to his proper figure.

3. *Fascia faciens Apostema* is that which will procure an Apostem, by summoning the Matter up into one part, which might perhaps dangerously flow into others, and those more principal.

4. *Fascia*

4. *Fascia prohibens Apostema* is that which forbiddeth the collection of Matter, and consequently hindereth the generation of an Aposteme.

For the matter of your Rowlers, they must be made of good strong even Cloath, white, clean, and gentle without Hem, Seam, or Thread hanging by.

Let the length be such as the Member affected and the multitude of circumvolutions require; longer in Winter than in Summer. *Hyeme* (saith *Celsus*) *sæpius fascia circumcirca debet: Æstate, quoties necesse est*: Rowl on, and again, in the Winter; in the Summer no oftner than needs must. His ground, I suppose he had from our great Master, *Sect. 5. Aphor. 20. Frigidum ulceribus mordax, cutem obdurat, dolorem insuppurabilem facit*: Cold nip-peth a Wound, makes the Skin hard, and causeth pain which cannot be digested. For the Breadth of the Rowler, *Petr. Pigræus, Lib. de Vulneribus*, is most punctual. Let them be for the Shoulders, saith he, of six inches broad; for the Thighs, of 5 inches; for the Legs, of 4 inches; for the Arms, of 3 inches; for the Fingers and Toes, of one inch broad. But this your judgment will teach you to alter, according to the conformation, shape and posture of Parts.

Fasten not your Rowler by tying a knot; nor yet sow it upon the Wound, or where you cannot easily come at it again; least you hurt your Patient. Quickness and neatness distinguishes the Workman from the ignorant and unskilful. As the Subject is more noble you work on, so strive to perform your office more excellently; intending not only your profit, but decency in the dispatch; that you may please the eye, both in the time of, and when you have done your work: thus shall you gain credit to your self, and endear your Patient to submit the more readily to your Rules, which is not the least Part of the Cure.

The Next thing that offers it self for keeping the Lips of the Wound together are *Sutures*, and they are of three sorts: first, the Incarnative, secondly, the Restraining, and thirdly, the Conserver.

The first is that which is in most use amongst us, and is by making so many Stitches at a distance.

The second is the Glover's Stitch, and much in use amongst the *Spaniards*, who stitch almost all Wounds by it. In the Forehead and Face I have seen them bring the Wounds very close: the third day they commonly cut the Knots off, and draw the Thread out; then with dry Stitches keep them so brought together; and in two or three days more they cure them.

The third Stitch is of use in great Wounds, and those of the *Oesophagus*, &c. to hold them forcibly together. It is performed with Pins or Needles, as in Hair-lips.

There are four sorts of Stitches, mentioned by the Ancients, for the Wounds of the Belly, whereof I shall take notice only of one, which I have made use of my self in the stitching of those Wounds, the manner whereof is thus: You are to take up the *Peritoneum* on one side, and leave it on the other; and then take it up on the other side, and leave it on this. It is so made, that the *Peritoneum*, which is a dry body, may be united with the Musculous flesh: otherwise only the Flethy parts would unite, and the *Peritoneum* lie open, upon which a *Hernia* would certainly succeed, and the Patient be put to the trouble of wearing a Truss the rest of his life. The Thread you are to use for this purpose ought to be a strong round white Thread proportionable to the Needle, and both accordingly as the wound requireth. You must remember to cleanse the Wound of its clotted Blood, if you can: but however go on with your work, that Blood will find its passage out.

In great Fluxes of blood the Glover's Stitch is best. Endeavour in your stitching to bring the Artery and Vein to its wounded fellow; so shall you the likelier secure your self, and make the work more seemly.

Of what
Rowlers
are to be
made.
Their
length.

Their
breadth.

Sutures
Three
sorts.

1. Incarnative.

2. Restraining, or
Glover's
Stitch.

Conserver.

In the Incarnative, you are to consider the Wound. If you find it but the length of a finger's breadth or a little more, 'tis not worth the stitching: your Medicaments and Bandage will keep the Lips together, and quickly heal it.

The distances of Stitches.

If the Wound be of two Fingers breadth, make one Stitch in the middle; if three fingers breadth, make two Stitches; if four fingers breadth, three Stitches; and so go on, making a Stitch less than the Wound is in number of fingers. Sometimes in declining Parts we make our Stitches at a little more distance.

Time of taking out the Stitches.

The time of taking out the Stitches is, when the Parts are agglutinated; which is sooner or later according to the habit of Body, or Season of the year. Commonly in great transverse Wounds eight days are required; in less Wounds not so deep, three or four days: in the Face, do it the next Dressing,

Caution.

lest the Stitches make so many Scars. But in this work you must use your judgment: for sometimes the Wound may seem to be agglutinated, while the Lips are held together by Suture, which, after the Stitches are cut out, is not so exactly cicatrized, but that you might have done better to have left the Stitches a day longer. But in this case the dry Stitch may help you; and that is another way of keeping these Wounds together. They are made with little bits of strong linen Cloth, triangular or quadrangular, or of such figure as may serve your purpose. These are most proper in the Face, to avoid the other way of Stitching: yet they are of use in other Parts, to preserve the Lips close. They are commonly spread with a Mixture of *sang. dracon. thuris, aloes, farin. tritic. gumm. tragacanth. an part. equal. cum albumin. ovi.* They ought to be of such a consistence, that they may adhere firmly to the Skin. They must be applied at such distance as they may best perform their work. After they are dried on, you must bring the Lips of the Wound close together, and retain them so, taking care they be not wet by the Matter.

Dry Stitches.

The fourth Intention, in preserving the natural temperament.

Nature agglutinative of Wounds, healing,

1. per Symphyzin.

2. per Syssarcosin.

Regiment. 1. Universal.

The Fourth Intention is, the preserving the natural Temperament of the Part, that thereby Agglutination may be obtained. Which Agglutination indeed, as I have already hinted, is the work of nature alone, by whose only power all Parts wounded, disjoyned and broken, are knit and made one again. But in regard there is a certain *Medium*, which answers in proportion to a Glew, required in this work, Nature taketh what is next at hand, even the Nourishment of the Part which is hurt, to make it of. *Ubi morbus, ibi remedium*, is here as an Oracle; Where the Disease is, there is the Remedy. No sooner is the Wound, but the Balsam is discovered. Blood (at least the serous part of it) is the Glew which she useth, both in curing by the first and second Intention. The first being performed *per Symphyzin*, i. e. a Re-union of the Parts without any *Medium*; by which word I here mean any *Callus* or *Flesh*, or other body interposed; for in another sense the Balsam of Nature is the *Medium*, the instrument of Unity, and knits the Parts together: the second *per Syssarcosin*, i. e. with a *Medium*, or interposition of some *Flesh* or *Callous substance*, that fills up the space between the Lips of the Wound. Great care must therefore be taken, that the Blood offend neither in quantity nor quality. Too much bringeth on proud and loose *Flesh*, as too little doth defraud the Part, and affordeth not a competency of Matter for the work. If the quality of the Blood be ill, it cannot produce good *Flesh*: as the Blood is, such is the *Flesh*.

The means whereby this Intention is performed is a Regiment of the Patient: and that is either Universal, as to his Diet; or Particular, as to the peculiar management of the Part it self. As to the Universal, we are all to consider, first, whether a full or slender Diet be to be used. This hath been a Dispute in former Ages: but I think, no man of common sense but knows, that as a full Diet is hurtful for those of a Plethorick Body, in Wounds where there is great Inflammation and like Symptoms; so when a Body hath been exhausted through loss of blood or the like, it's reason that a greater liberty should

should be allowed, as to take Broths, Jellies, new-laid Eggs, &c. Withal I conceive there should be Consideration had of the Patients manner of living. Some people have so accustomed themselves to drinking of Strong drinks, that without such a proportion they cannot live. I could instance it by many Stories, if it were necessary; but I shall give you one for all, and that from abroad.

Ed. Br. an old Servant to a Person of Honour, was bit by a Monkey in the Back of his Hand. To prevent Inflammation, I forbid him Wine. The next morning he complained he had not slept that night, that he was faint and sick, and that his Wound was the least of his ailment. That day he continued faint and ill, and the next morning complained again of his want of rest; and that afternoon he swooned, and complained he could not live without Wine. He had good Broths, Caudles, and such like; and I believe he did drink some Wine. (But he was allowed by his Master a Bottle or a Quart every morning for his Draught, and was seldom sober.) His Wound was indigested and inflamed. I complied with his desire; he drank again as he pleased; his Sickness went off, his Wound digested and he was soon after cured.

This I have seen often in some of the *Dunkirkers* at Sea, who drank extraordinarily, and were full of drink at the time of their Sea-fights. I could scarce ever cure any of them without allowing them Wine; and thereby their Spirits were kept up, and I had the liberty to bleed them as I thought fit. When these kind of people eat as plentifully as they drink, they then upon a sudden change of Diet labour under *Crapula*, and are subject to Fainting, or have Colick, *Dysuria*, &c. and if the Wound happen in the *Abdomen*, it gives a suspicion (to those that are not well skilled in the Symptoms of Wounds) to think that it arises from the penetration of the Wound, when there is no such thing; and so by the perseverance in those Rules the Patient suffers.

It has been a common Saying, *A hare of the same Dog*, and thought that Brandy-wine is a common relief to such. What then must become of such a one, after hard drinking for many Months together, if he chance in heat of drink to be wounded, and from that time his Chirurgeon condemn him to Ptisan for a week together, nay two days? Will he not faint and languish, and his Wounds become indigested and inflamed? You may laugh at my pleading for them: but I hope you will consider I am a Water-drinker the while.

As for other things, such Diet is to be observed as their strength will permit. We do not use to purge with Catharticks in Wounds, lest by stirring Matter it flow to the weak Part: but we allow Lenitives, as *Cassia*, Tamarinds, *Manna*, *Senna*, Rhubarb, with *Sal prunelle*; also Electuaries, as *elect. lenitiv. diapr. syr. ros. solut. de cichor. cum rhubarb.* also Broths wherein have been boiled Lettice, Succory, Endive, Sorrel, Purslane, Burrage, Buglosse, &c. And we let them blood according to the Strength of their Body, and as Symptoms indicate.

Another part of the Regiment of wounded persons will consist in giving of Vulnerary Drinks: of which we find many mentioned by Authors, and the *materia medica* very large; witness that great tribe of Vulneraries in *Parkinson's Herbal*.

The most common Simples with us in *England* are Comfrey, Bugle, Ladies-mantle, Agrimony, Sanicle, Pauls-betony, Fluellen, Perwinkle, Mugwort, Plantane, Horse-tail, Adders-tongue, Avens, Cinquefoil, Wild-tansie, Vervein, Ground-ivy, Golden-rod, Herb-trinity, Centory, St. Johns-wort, Snake-weed, Knot-grass, Mouse-ear, Yarrow, Scordium, Strawberry-leaves and roots, Tormentil, Bistort, Valerian, Red roses, &c. Some of these are made choice of to be boiled in Water, or White wine, with an addition of Honey: of which sort you have sufficient examples in the *Decoctum traumaticum* of the *Pharmacop. Lond.* Their Principal use is in Wounds of the *Thorax* and *Abdomen*: yet they are frequently prescribed in all great Wounds. Sometimes also, if the Disease

Consideration from the Patient's manner of living,

Ed. Br. cured by allowing him Wine.

Vulnerary Drinks, Powders, and Electuaries.

run out at a length, we add *Guaiacum*, *Sassa*, and Scorbutical Medicines. There are likewise Powders made of Crabs eyes, Coral, Nutmeg, &c. and Electuaries of some of the aforesaid Roots and Herbs beaten up with these Powders.

2 Particu-
lar.

The Particular Regiment is, in preserving the natural Heat and Tone of the Parts without which we can hope for no Union. For the better understanding hereof, I must put you in mind, that there is not any Part of our body admits of a Solution of continuity without pain. Every Scratch in the Skin, and a little cut in the Finger, is painful: much more are the deeper Wounds in the Flesh. This pain stirs up a Heat fermenting in the serous part of the Blood, which readily makes way to the Wound, and, if not timely prevented, distendeth and raiseth the part into a Tumour with Inflammation. If this happens in a full Body, or one of an ill Habit, where the Blood is serous, and more apt to ferment, the mischief is the greater. And if the Wound be in a declining Part, as the Legs, the influx of Humours is more abundant; and the Member through its weakness not being able to assimilate, nor yet expel them, is the cause that Crudities do heap upon the lower parts, and make an Oedematous Tumour.

A Person
prickt
with a
Thorn in
his Leg.

To make this more plain, I shall give you one Instance of the many that happen daily. A young Gentleman about 18 years of age, of a good Habit of body, one day sporting in the Country with his Gun and Dogs, was prickt with a Thorn on the outside of the Calf of his Leg. He took little notice of it till the Evening, and then dressed it with a little Balsam. The next Morning it was more painful and inflamed, and at length terminated in a *Phlegmon*. I was then sent for, and found the Tumour large and full of Matter, and in the lower part about the Foot an oedematous Tumour. I opened the swelling above, and, discharging a quantity of Matter, cured the Patient as is usual in *Phlegmons*.

Medica-
ments pro-
per in the
beginning
of a *Phleg-*
mon.

If this person had been treated according to the universal Regiment, by Bleeding and lenient Purgatives, &c. nay, if only after this particular Regiment, in preserving the Temperament of the part, he had been dressed, as in this case he ought to have been, by Refrigerants and Astringents, to have prevented the influx of Humours, and with a Pledgit of *basilicon*, to cause Maturation in the festred Scratch, with convenient Bandage over all; it had preserved the Tone of the Part, and cured the Sore without farther trouble.

To proceed rationally by this Intention in Wounds, your first Application ought to be of such Medicaments as have an agglutinative faculty, as *bolus Armen. sang. dracon. thus, aloes, gum. elemi, colophon. terebinth.* and apply over them such as are cooling, and of an astringent quality, to resist the Influx of Humours, as Cloths dipt in the Juices of the following Plants, *fol. plantag. equiseti, millefol. vinca pervinca, ulmi*, or Red wine, or Oxycrate. To which you may add some of these Powders, *flor. ros. rub. balauft. nuc. cupress. gallar. far. bord. & fabar. & oleum olivar. matur.* These simple Medicaments may be proportionably mixt according to the Habit of the body and condition of the Wound. In small and superficial Wounds, Nature of her own accord is wont to effect the Cure; she seldom requiring more from us, than that the Lips of the Wound be brought close together, and defended from the Fluxion, &c. as aforesaid, and with Bandage so retained. A Pledgit of *liniment. Arcei* with *empl. diapalma* frequently serves the turn. But in greater Wounds that will not be so easily cured, we stitch the Lips together, and sprinkle them with such like Powder: R *bol. armen. thuris, sang. dracon. an part. aequal.* and apply a Mixture of some of the same Powder with the white of an Egg over them, with a Compress prest out of Oxycrate, and a sutable Bandage over all. This is generally the way: but lest by the adhesion of this emplastick Medicament the Lips of the Wound should be torn or disturbed in taking the dressing off, I chuse rather to apply over the sprinkled Powders

a Pledgit with some of these following Sarcotick Unguents : *R. terebinth. Venet. ʒiij. gum elemi ʒij. sang. dracon. thuris, mastich. an. ʒj. Misc. & fiat Unguent. S. A.* or this ; *R. terebinth. ʒij. resin. pin. oliban. colophon. an. ʒjʒ. mastich. ʒj. croci ʒj. cera ʒij. olei hyperic. q. s. fiat Unguentum.* Over which may be applied any of these following Emplasters, viz. *empl. diapalmæ, diachalcit. de lithargyr. de bolo, &c.* In all Wounds where I design to cure by Agglutination, and would preserve my Stitches, I forbear the use of Fomentations and slabby Medicaments : nor will you have occasion for such Applications, if you proceed rationally, as hath been abovesaid ; for Nature will do her part towards the Agglutination of the Wound, if you defend it from the influx of Humours. I always accounting these Wounds near cured, when the Lips are retained close together, and dressed as abovesaid.

Thus far I have proceeded in the Agglutination of Simple Wounds : I shall now consider of Wounds with loss of Substance made by Bill, Pole-axe, Sword, &c. some cutting twice or thrice in one or near one Place, whereby the Wound is large, transverse, yea and oblique, at the same time, and the Lips contracted various ways, and so the Cure is rendred much more difficult. These kind of Wounds are not so often seen in times of Peace, but in the Wars they are frequent, especially when the Horse-men fall in amongst the Infantry, and cruelly hack them ; the poor Souldiers the while sheltering their Heads with their Arms, sometimes with the one and then the other, until they be both most cruelly mangled : and yet the Head fareth little the better the while for their Defence, many of them not escaping with less than two or three Wounds through the Scull to the Membranes, and often into the Brain. And if the man fly, and the Enemy pursue, his Hinder parts meet with great Wounds, as over the Thighs, Back, Shoulders, and Neck. Mr. Sanderson, now one of the Chirurgeons of St. Bartholomew's Hospital, was once with me assisting in the dressing such. At Sterling in Scotland Mr. John Chase, Apothecary to his Majesty, helped me in the like work. One of the Souldiers had such a gash thwart the Nape of his Neck, that it was a wonder to us he lived. His Wound was full of Maggots ; and so were those of all the rest that were inflicted on the Hinder parts, they having been some days undrest.

In order to the Cure of these Wounds, you are in the first place to cleanse them, and then to endeavour the bringing of the Lips together by the Incarnative Suture, making so many Stitches as may retain them together. And if you doubt this way not sufficient, you may then, as in a Hair-lip, pass Needles or Pins through the Lips of the Wound, with little Plates of Lead to secure them from tearing. But if the Wound be so deep as you suspect its incarning in the bottom, you must leave a declining Orifice for the discharge of Matter. If the Wound hath laid long undressed, or were not stitched at the first dressing, and be now so contracted and stubborn that the Lips of it will not be brought near one another ; you must then foment them warm with some lenient Decoction. *ex fol. & rad. althææ, malvæ, viol. sem. lini, &c.* or with new Milk ; then joyn them together, as hath been said, and dress them as Wounds so stitcht. But if you left a declining Orifice, keep it open by a small Tent dipt in some such Medicaments as shall be by and by prescribed, and after Digestion withdraw the Tent, and heal it as such like Wounds. The greater Wounds, which cannot be brought together by Suture, must be digested, and so disposed as that new flesh may be generated to fill up the Cavity : to which purpose *R. Terebinth. ʒiij. far. hord. ʒvj. thuris ʒj. Misc. cum vitell. ovi.* To this after a day or two may be added *mel. ros.* During which the Humours ought to be diverted from the Wound by the universal Regiment set down of Bleeding, Purging, &c. and by the external application of Refrigerants with good Compress and Bandage, to press the Lips of the Wound together, that it may

Of compound Wounds.

may be the sooner cured. After the Wound is digested, you may deterge with *mundif. Paracelsi*, or with this of *Quercetan's*, which is also a good *Sarcotick*: *Rx fol. plantag. apii, an. Mj. ros. rub. Pij. vini rub. ℥viij. coq. ad medietat. in colat. dissolve sacchar. rub. ℥ij. terebinth. ℥j. far juniper. & orobi, an ℥vj. aloes, myrrhæ. an. ℥j. decoq. rursus, & addendo ceræ q. s. reduc. ad formam Unguent.* or with this Balsam of the Spanish Priest, commonly called *ol. Aparici*; *Rx ol. olivar. ℥iij. terebinth. Venet. ℥viij. frument. integr. ℥j. sem. hyperici ℥ij. rad. card. benedict. rad. valerian. an. ℥j. pul. thuris, vernicis, an. ℥ij.* The Seeds and Roots are to be cut and beaten, and infused two days in White-wine: then the Oil and bruised Wheat must be put to it, and so boiled together to the consumption of the Wine; then strain the Liquor hard out, and add the *terebinth. thus*, &c. giving it two or three warms more, and reserve it for your use. In these larger Wounds, it will be necessary to apply warm Stupes wrung out of Red wine wherein hath been infused *flor. ros. rubr. balauft. nuc. cupress.* &c. But those Wounds that are full of Maggots or Worms ought to be washt with a Decoction *absinth. card. benedict. rad. gentian. myrrh. aloes*, &c. and deterged as abovesaid with Mundificatives; after which you may proceed in the same method of Cure as is before mentioned. As to the time of dressing Wounds, the second dressing ought not to be till the third day, by which time we suppose them somewhat digested: from that time every other day may be sufficient. *Galen*, speaking of the dressing Ulcers, saith, he dressed them but every third day, tho' the Matter flow very much; and but every fourth day in Winter. Indeed the too frequent dressing is hurtful: yet there may be occasion of opening them sooner than by him proposed, for the strengthening of Bandage, or for the preserving of the Stitches by putting on dry Stitches. Also the retention of Matter causeth the Suture to relax, and the Lips of the Wound to open again: therefore that ought to be left to the discretion of the Chirurgeon.

After the Cavity in the Wound is incarned, you may cicatrize with *unguent. desiccant. rubr. aq. calcis*, &c. or with the Vitriol or Alume-stone, and dry Lint.

Of contu-
sed
Wounds.

If the Wound be made by a Fall or Blow with great Contusion, you must endeavour that the bruised Flesh be digested and turned into Matter; to which purpose *unguent. basilic.* is proper, applied warm upon Lint, or dissolved in *ol. lumbric. lini*, or such like, anointing the Parts about with *ol. ros. & myrtill. cum album. ovor.* with which you may also make up a Restrictive, with an addition of *bol. Armen. sang. dracon. balauft. flor. ros. rub.* and apply it over all. But if the Wound were of some days continuance before you were consulted, you must then foment it with Discutients, and embrocate the contused Parts with *ol. cham. sambuc. rutac.* &c. and continue the application of Maturatives, proceeding as is set down in the Chapter of *Ecchymosis*. After separation of the contused Flesh, the loss of Substance must be restored by Sarcoticks, and the Wound cured as abovesaid; remembring that in these contusions Venæsection is most necessary. If the Wound be deep, and the Orifice narrow, yet capable of enlarging; it must be laid open proportionably, that the Matter may not be retained, and render the wound more hollow. But if the *Sinus* be of any great length, and so depending that the Matter cannot discharge by the wound; you may then make a Perforation in the lower part for discharge of it, by Knife or Caustick, or both, first Caustick, then Knife; or by a Seton-needle with a twisted Silk or Thread, as hath been shewed in *Sinuous Ulcers*; and proceed accordingly.

What I have said of wounds cut and hackt in heat of Fight by a broad Sword, happeneth sometimes in fighting or foyning with a Rapier. For if the Thrust be redoubled, an Attrition may be made in the lower part of the wound: and if there be such an Attrition there, or if some tendinous body be there wounded, it will be too painful to heal by the first Intention; and if

if it run far, and deep among the Muscles, it may be a maiming of the person, or an endangering of his life, to cut such a wound open from top to bottom. Wherefore you ought to consider well the manner of the wound; and if it penetrate so deep, and be not capable of being laid open by reason of the thickness of it, make a search with a Probe to the bottom, and feel how far distance it is there from the Skin: and if it do not lie far off, nor under any considerable Vessel, the speediest way of curing the wound will be by passing in a Director, and cutting it open. Which done, keep it open, and permit the upper part to agglutinate. But if you think it not fit to open, yet mark the place, that in case there be a necessity of doing it afterwards, you may make the Apertion more certainly. That done, dress the wound with a proportionable short Tent armed with a Digestive *ex terebinth. cum vitell. ovi*; and embrocate the Parts about with *ol. ros. myrtill. & aceto*; over which apply *empl. è bolo*, or such like; and afterwards proceed as aforesaid. For your farther information and more caution, I shall give you one Instance of the ill effects of cutting open such wounds the whole length.

Some years since a young Gentleman was wounded in a Duel; the Rapier entred into his right Side slanting by his short Ribs under the Muscles, reaching within a finger's breadth of the Spine, with a redoubled Thrust. He was carried to a French Chirurgion's house, and dressed by him. The third day after I was fetcht, and saw the wound inflamed and undigested, likewise the Orifice over stretched by the extraordinary bulk of the Tent. I advised the dressing it with one lesser, and armed with a Digestive, also Embrocations, &c. as above said. But it was in vain. This Pretender dressed the wound with a Tent proportionable to the former, anointed with some Unguent wherein was *sang. dracon.* binding a Stupe over it. By this way of dressing the pain and inflammation increasing, I was fetcht again two days after, and then made a search; and feeling my Probe penetrating obliquely down deep among the Muscles, within a finger's breadth of the Spine, (as above said,) I concluded it best to make an Opening there. Accordingly I used a mild Caustick, then dressed up the wound with a less Tent, spreading it with a Digestive *ex terebinth. &c.* embrocating it *cum ol. ros. &c.* and soon after applied an anodyne Cataplasm, and so left the Patient to rest. But in the night, he turning in his bed, the Cataplasm slid off, and our Monsieur discovered a discolouring in the Part, and supposing it an approach of a Gangrene, I was fetcht out of my bed. Upon sight of it, I found it only stained with the Saffron and Lupins which were in the Cataplasm, and applied it again, leaving the Patient better satisfied. But the next morning I met another Chirurgion of the forementioned Monsieur's acquaintance. We took off the Dressings, and saw the wound digesting. I proposed the dividing the Escar below, to give vent that way to the Matter; but they were positive for the cutting open the wound thwart all the Muscles, the length of between 5 or 6 Inches. To which purpose Sponges were prest out of Melilot Emplaster, and the wound fill'd with them. The next day this latter Operator laid the wound open with a pair of Scissors so far as his Sponges had dilated it, and dressed it up his way. The morning following the wound appeared dry, and the Parts about inflamed and swelled very much, and continued exceeding painful to the third day. Then they, being at a loss, were contented to divide the Escar; upon which there discharged a quantity of Matter made by Apostemation in that part: yet notwithstanding they would not enlarge that Opening, but began where they ended, and cut open the wound to the Aperture made by the Caustick, and dressed it up as formerly. Thus they having increased the pain, the Fluxion also increased, and a great quantity of Matter discharged from the lower part, also a large Sinus discovered it self stretching over the Spine to the other Side. In order

Of a double wound by Puncture.

to the curing of this, they designed Injections ; which I endeavoured to dissuade them from : but they persisting in the use of them, I protested against their proceeding, and left them. They laught at me : but about the ninth day after the Patient died, and made good my prediction. For, alas ! what else could be expected from such a Division of parts, and casting in Injections, but to render it more sinuous from Side to Side ? whereas possibly by Digestion and good Compression it might happily have healed.

The fifth Intention, in preventing ill Accidents. Of Hemorrhagia or Bleeding.

The Fifth Intention is, in preventing of evil Accidents, and correcting such as are already fallen upon the Part. And these are *Hæmorrhagia*, Pain, Fever, *Intemperies*, Convulsions, *Syncope*, *Delirium*, and Palsie.

We shall begin with *Hæmorrhagia*, as being incident to all wounds more or less, and sometimes the cause of all other Accidents ; wherefore I have treated purposely of the wounds of *Veins and Arteries* in a Chapter by it self ; so intend here only to speak of it as it is made by some Authors the second Intention. The way to stop the Bleeding as it is common in all wounds, is, by bringing the Lips of the wound close together by Suture, and by applying such Medicaments to them as have a drying and agglutinative faculty ; *Galen's* Powder of Aloes Pj. *thuris* Pij. and Hares-furres mixt with the white of an Egg, and applied upon a Pledgit, also a Plaister of the same Restrictives, with Compress and Bandage. But if the wound be such that you cannot bring the Lips of it together, apply the aforesaid Powder upon Dossils on the bleeding Vessels, and your Astringents next, with Compress and Bandage over all : then place the Member in such a position as may be for the ease of the Patient.

Of Pain.

You ought to be speedy in the mitigating Pain, for that nothing dispirith your Patient more, nor maketh more disturbance in wounds, the Humours flowing abundantly to the pained Part, whence insueth great Inflammation and Tumour. Wherefore you must hasten to succour it by Anodynes ; amongst which Phlebotomy is proposed by Authors in the first place, for that it maketh evacuation and derivation of the ferous Humour which causeth the grievance. The external Applications proper to ease Pain are, *fol. & rhad. althææ, malvæ, viol. hyoscyami, thaps. barbat. flor. ros. cham. melilot. sem. lini, fenugræc. cydonior. psyllii, papaver. alb. &c.* which may serve for Formentations and Cataplasms, being boiled in the Broth of a Sheep's head and feet, or new Milk. In the beginning of the Pain a Cataplasm may be applied of *far. hord. fabar. flor. ros. rubr. sambuci*, decocted in Red wine or Oxycrate, with an addition of *ol. ros. &c.* If the Parts be already inflamed, take *fol. hyoscyami* boiled in Milk, with White-bread crums, a new-laid Egg, a little Saffron and *ol. ros.* and make them into a Cataplasm. For more variety, I refer you to the Chapter of a *Phlegmon*, in *Tumours*. If after this it tend to Suppuration, you may proceed as in a *Phlegmon*. If it yield to none of these, you may truly conjecture some Nerve is offended : then proceed as is said in the *Wounds of the Nerves*. But if pain be caused by Matter that wants a passage out, give it one by Knife or Caustick.

Of distemper by Cholera.

If some hot Distemper from Cholera offends the part, which may be perceived by what hath been said of an *Erysipelas*, then these Unguents, *nutritum, alb. camph. refrigerans Galeni, populeon*, are proper ; or this following : *R succi plantag. solani, semperviv. an. nj. bol. Armen. ʒß. lithargyr. loti. aq. plantag. & tutiæ præparatæ, an. ʒj. ol. ros. omphac. & nymph. an. ʒij aceti rosacei & ceræ tantillum ; fiat Unguentum.* If the Distemper be œdematous, then Fomentations wherein *flor. cham. aneth. meliloti, sem. fenug.* and such like have been boiled, may, with good Bandage, serve your purpose.

Of Fever.

Fever accompanies great Wounds ; especially where there is Inflammation, it is almost inseparable ; therefore you are the less to trouble your self thereat. But if it continues after the Pain and Inflammation is removed, and
hath

hath *Delirium* or *Syncope* with it, there is great cause to doubt the welfare of your Patient: therefore hasten Revulsion by Venæsection of Veficatories, also use Clysters and lenient Purgatives, to loosen the Body; and prescribe Juleps, Emulsions, Epithems, which, by refrigerating and contempering the heat, may relieve the Patient. The other Symptoms of Gangrene, Convulsions and Palsies, are translated to the Discourse of *Gun-shot Wounds*.

CHAP. II.

Of Wounds of the Veins and Arteries.

THE next thing that offers it self to our consideration is, the Wounds of particular Parts: and first of the Veins and Arteries, which are subject to great effusion of blood, therefore require your speedy help. You may distinguish whether the blood be from an Artery or Vein, by the flowing of it, and by its colour.

From the Artery the blood rushes impetuously and *per saltum*, by reason of the dilatation and constriction of the Heart, and is of a florid colour. The Venal blood flows with a more smooth and even stream; it is of a grosser consistence, and of a darkish colour.

Of these latter Wounds there is no great danger; *Galen's Powder* with the White of an egg, and the formerly proposed way of dressing, will stay their bleeding, and cure the Wound in few days. But those of the Arteries are most difficultly stopt, for that the blood is in a most vigorous and strong motion.

If these Wounds be not with loss of Substance or bruised Lips, you may bring the Lips and Mouth of the Arteries both together, and retain them by Suture, passing your Needle with a strong waxed Thread through both of them, making the Glovers Stitch, which *Guido* calls *Suppressio*. Then apply such like Emplastick as this; *R. bol. Armen. ʒiij. sang. dracon. thuris, aloes, glutin. sicc. an. ʒj. gyss. farin. volatilis, an. ʒβ. hypocistid. acatiæ, sumach. an. ʒiij. Misc. cum album. ov.* to the consistence of Honey, and apply over it a Compress squeezed out of Oxycrate or Red wine; then rowl up the member with the agglutinative Rowler, beginning on the opposite part, bringing both the heads over the Wound: and having taken a turn or two there, rowl upwards and downwards, so as to press the blood upward, and restrain the Influx from above. Your Bandage must be so made, that it be to the ease of the Patient: the Position ought also to be such as may prevent Pain. He must keep cool and quiet, and observe a slender Diet. His Drink ought also to be cooling and astringent: as Fountain-water with *sal prunell.* or *acetum*, or with gads of Steel quencht in it, and sweetned with Syrup of Coral, Pomegranates, Limons, &c. or this following Draught of *Quercetan's*, *R. croci Martis, essentia corallor. an. ʒj. de ros. sicc. ʒ myrtill. an. ʒj. aq. papaver. rhæad. ʒiv. Misc.* so also a decoct. *hord. cum sem. papav. alb. ʒ hyoscyam.* with an addition of Rose-water, and Sugar of Roses, to sweeten it; also a grain or two of *laudanum* in case of extremity, if the Patient bears it well. You may also let the Patient bleed, by opening a Vein on the Contrary part, if his strength will permit it, taking a little at a time only for Revulsion. You may use also Cupping, Friction, and Binding the remote Parts, for Derivation.

In Wounds of the Artery, dress not oftner than you needs must; once in five or six days may be sufficient, whilst there is danger of Bleeding. But if you find the Blood hath made its way through all the Dressings, and the Bleeding continues, take them off: and if you discover the Stitches broken,

Signs of the Artery wounded. Of the Vein wounded. Prognostick of Vein, and Cure. Prognostick of Artery, and Cure. Suture.

Rowler.

Ordering the Part and Diet.

Bleeding where.

and the Lips of the Wound incapable of being stitched again; consider whether the bleeding Artery may not be taken up and tied: if it may, do so. The way of doing it you may see in the Chapter of *Aneurisma*, and in one of the following Observations. Then proceed in the Cure by Sarcoticks, &c. But if the Artery lieth so deep that you cannot possibly come to make Deligation of it, proceed by application of Escaroticks to the Vessel, or by an actual Cautery.

Escaroticks.

If by Escaroticks, then you ought to cleanse the Wound of the clotted blood, and dip your Dossils in some such like Powder; *R. thur. pulv. ʒij. aloes, glutinis succ.an. ʒj. chalcant. ust. ʒij. arsenici ʒvj. gypsi ʒiij.* Apply these with Lint on the Bleeding Artery, and over it Dossils of Lint dipt in *album. ovi cum pulv. Galeni*, and dress up the Wound as aforesaid. At your next dressing, leave the Escarotick sticking on the Artery, and incarn as fast as you can. For want of the aforesaid Powders, take Vitriol powdered and tied in a fine Rag, and apply it to the Artery with convenient Dressings over it, as before said.

Cautery.

But if after these your Endeavours the Artery yet continue to bleed, you must use the actual Cautery; by which the Vessel will shrink up at both ends. You may convey the Cautery down to the Artery through a *Cannula*: and that the Cautery may not burn through it, you may cover the outside with a Plaister or Rag wet with the White of an egg, &c. That done, dress the cauterized part with Dossils dipt in Mucilage of Quince-seeds, or with the White of an egg, and embrocate the Parts about *cum ol. ros.* applying *emplastr. diachalcit. cum succis plantag.* &c. over all. After you have allayed the heat of the Part, digest, incarn, and cicatrize the Wound as followeth.

1. Observation of a wound of the internal Jugular.

A Gentleman of about 35 years of age was wounded with a Rapier on the right side of the *Aspera Arteria* into the internal Jugular, through his Neck, it passing out below the last *Vertebra*. The Wound was small, yet bled with a full stream. A Servant stopt it with his fingers, whilst I made Dressings ready of our common astringent Powders, with the White of an egg, and a little *acetum*, spread upon a Pledgit of Lint, and an Emplaster of the same, with Compress and such Bandage as it would bear. The Wound behind bled when that before was drest. I applied the said Medicaments to that, and caused them to be held close till they were dried on. Then we put him to bed, and kept him cool and quiet. I used all my endeavours for the temperating his blood, as is usual in such cases, and drest him but once in four or five days, unless I were necessitated by the bursting forth of the blood: yet he bled at times about 16 or 17 days. His Wound by the *Vertebra* of the Neck healed in few days; and the other near the *Aspera arteria* was cured by this way of Aggultination the 19 or 20 day.

2. Observation of an Artery wounded.

A Man wounded in the Artery under the right Eye was immediately drest by Mr. *Fawcet* Chirurgeon; but the next day in the afternoon the blood burst out impetuously. The Wound had been made by the corner of a Trencher, and was not so big as a Silver-peny. I drest it with *pulv. Galeni*, and applied a Plaister over it made up with my common restrictive Powders *cum album. ovi*, with good Compress and Bandage. The next day his Wound bled again, and upon stopping thereof with my finger, the Blood was observed to beat all along the Artery, from the Aperture to the Temporal Muscle, with a greater force than is commonly seen in an *Aneurisma*. I pierced through both the Lips and Artery with a curved Needle, and by Deligation restrained the bleeding, then dressed it up with Emplasticks as before, concluding I should have very little more trouble from that Wound. But 2 or 3 days after it burst out again, and in my absence some other Chirurgeon was called in and dressed it. Afterwards, at another bleeding, Mr. *Fawcet* dress'd him, and at another time Mr. *Arris*. The Wound being thus enlarged with the crowding in

in of Dossils, and lying in a very inconvenient place for Bandage, it bled often, and was dressed by such Chirurgeons as they could meet with in their necessity. By the frequent application of Escaroticks to stop the bleeding, his Eye was so much inflamed and corroded, that it was verily believed by us, that if he did recover of his Wound, yet that Eye would be lost. But his continual bleeding thus many days had so exhausted his Spirits that there was small hopes of his surviving it. At the last bursting out of this Vessel, Mr. Ed. Molins deceased, Mr. Fawcet and my self met together at his Chamber. We found him lying as dead with his Hand out of the Bed upon his Breast. We endeavoured to feel his Pulse, but it not beating, we concluded him dead, and took the Dressing hastily off the Wound. It did not bleed, tho' it was open. We supposed the blood exhausted. The Artery lay in the Wound torn by the Escaroticks. We took up the ends of it, and tied them, dressing the Wound with liniment. Arcei and a Plaister over it, not believing that the man would ever recover. But from that time the bleeding of the Wound ceased, and it daily incured by very common Remedies, and was soon healed, to my admiration. He was in less than a month perfectly cured both of his Wound and Eye. This Patient had been subject to the like Bleeding formerly upon very small Wounds.

A Butcher living at Westminster was wounded in the Artery between the Thumb and Fore-finger. After he had been drest 3 or 4 days by some of his neighbouring Chirurgeons, the Wound continuing to bleed, he came to me late one night with Dossils crowded in it. I threw them out, and with a Needle and Thread sticht up the Artery, and the Wound with it; then sprinkling some of my agglutinative Powders upon the Suture, I dressed it up with a restrictive Plaister and Bandage, as in the former Wounds is said, and in three or four times dressing he was cured. But afterwards there appearing some Pulsation extraordinary under the Cicatrix, which proceeded from the too lax Incarnation of the Wound, I dressed him with a Pledgit dipt in a dulcified Tincture of Vitriol, with good Compress and Bandage. At the next dressing it was dried and shrivell'd, so that there was no more Pulsation to be observed.

One in the New Exchange had an Aneurisma in the Palm of his hand reaching to the third and fourth Fingers, which at last broke out, and bled at times the space of 8 or 10 days. I dressed him with the Tincture of Vitriol abovesaid once in 4 or 5 days, stopt the Bleeding, and cicatrized it firmly, so that there appeared not the least Pulsation under it.

A sedentary young Gentleman, of an ill Habit of Body, was wounded by a Penknife in the inside of the Calf of his Leg into the Sural Artery. A Chirurgeon dressed up the Wound with Dossils dipt in escarotical Powders, *chalcanthum ustum*, &c. with Plaister and Bandage, by which he stopt the Bleeding. The next day I was consulted, and being informed of the Wound, and the manner of dressing, I deferred the opening of it, and advised him to keep his Bed. He did so, but complained then of a throbbing pain in his Wound, and was very apprehensive of its bleeding, looking himself often upon the Bandage, and alarmed me by frequent messages. The third morning I met his Chirurgeon there, and looking upon his Leg, found the Bandage all bloody. We took off the Dressings, and saw the blood fresh in the Rowlers; but in taking off the Plaister, the Dossils came out only foul'd with a bloody Sanies, as is usual in like Wounds after the filling them with such Powders. The Wound and Parts about were inflamed and swelled; yet I had much ado to dissuade the young Chirurgeon from dressing it again with Escaroticks, though he saw the Accidents arising thereby. But at last I prevailed, and dressed the Wound with a Dossil spread with the common Digestive *ex terebinth. cum vitel. ovi* sprinkled with *pulv. Galeni*, embrocating the parts about with *ol. ros. cum aceto*, and applying *emplast. è bolo* over all with good Bandage. By this

3. Observat. of an Artery wounded.

4. Observat. of an Aneurisma broken open.

5. Observat. of a wound of the Sural Artery.

this way of dressing he was eased, and the wound at liberty to discharge the Sloughs and *Sanies* which were made, and choaked in by the former dressing. If it did not thus digest, yet I concluded that at the next dressing it would be in our power to lay open the wound, and divide the Artery, without hurting the Nervous or Tendinous bodies near it. But the next day I found the Patient unsatisfied how his wound could cure so drest, without a Tent, and often murmuring that it would rankle; yet he continued pretty easie, and did not bleed during those three days. The fourth day at the opening we found no Blood but what was mixt with Matter, the wound also lookt well; yet I complied with the Patient, and put in a short Tent spread with the Digestive as before. The third day after we opened it, and saw upon the Dressing some fresh Blood followed by a thick white Matter, as from a *Phlegmon*. It proceeded from an Apostemation made by the Escaroticks. The wound thus digesting, I left off the use of the Tent, and Dressed it with a Dossil, and by good Embrocations, Compress and Bandage endeavoured the pressing out of the Matter: which accordingly lessened each dressing, but was not well digested, nor free from some small tincture of Blood. But this proceeded from his ill Habit of body, he being highly Scorbutical, and subject to Fainting, loss of Appetite, and pituitous Swellings on his Feet. Upon which account Doctor *W.* was consulted, and somewhat relieved him. After his wound was cured, I caused a streight pair of Stockings to be laced on both Legs, to restrain the Swelling, and prevailed with him to rise daily: and after he was able to walk, he retired into the Country, but hath not yet got off the Disease he heightened by keeping within doors with this little wound. Doubtless this Cure had been speedier, if immediately at the first dressing his Leg had been bound up with Aglutinatives, and the whole committed to Nature.

6. Observation of an Artery Prickt in letting blood.

A poor fellow living in the Country was accidentally in letting blood prickt in an Artery. The Arm swelling and growing painful, he put himself into another Barber-Chirurgion's hands, who by unfit Applications rarified the Tumour, and made way to the Extravasation of the blood; which increasing the Tumour, and rendring it soft, was supposed by the Barber to be a Suppuration of Matter. He accordingly opened it by Knife or Lancet: at which an impetuous Flux of blood burst forth, to the quantity of 4 flaggons (as they told me.) They made a shift to stop it: but the Bandage being made too hard and unequal, the Arm swelled, and inclined to gangrene. While this poor man lay thus afflicted, we his Majesty's and Royal Highness's Chirurgions, attending the Court, visited him, and prepared for the taking up this Artery, or, in case of failing, to cut off his Arm. The Patient being taken out of his bed, and placed in a Chair towards the light, we took off the Dressings, and I viewed the Arm: where finding no Gangrene, according to the report of the Chirurgion, but rather an *Ecchymosis*, we made a Bandage above the wound, to prohibit the Influx of blood. One of the Chirurgions making a gripe thereon, we made an Incision into the Tumour on the inside of his Arm, according to the length of it, over the Artery; and after we had pulled out the coagulated blood, and laid the Vessel bare, we passed a Needle with a Ligature under the Artery, and tied it, then cut off the ends of it, and loosened the Bandage above: and seeing it bleed no more, we dressed it up with Pledgits dipt in the common Digestive *ex terebinth. cum vitell. ovi*, applying them with *pulv. Galeni* next the Artery, and lightly filled up the wound with Pledgits of the Digestive dipt in *ol. ros.* warm; then embrocated the Arm with some of the same Oil, and laid a *diachalcit.* Plaister over the wound and Parts about, also applied *empl. Paracelsi* and *diachalcit.* over the Hand and Arm, which were œdematous. Then with Bandage we began at the Hand, and rowled up to the wound, taking a turn or two over it, and so rowled up the *Axilla*. He being returned again to

to his Bed, we placed his Hand upon his Breast, and felt his Pulse beat strongly in that Wrist. At the next dressing we found the Tumour dispersed, the Wound fresh, and tolerably digested. We then passed another Ligature upon the Artery above the first, and in pulling the first to divide the Artery between the Ligatures, the Artery broke; which was as well. We dressed it up as before we had done, only leaving out the Powders. At the next Opening, finding the wound in a very good condition, the Lips of it being digested and contracted, we dressed it up with *mundif. Paracelsi*, &c. Then seeing it in a hopeful way of Cure, I returned to *London*, leaving the Patient to my Fellows, who dressed it successfully the space of 10 days without any appearance of blood. In some of their absence the Barber-Chirurgion dressed the Patient. Whether it was in wiping off the Knot, or crowding in Dressings, but it burst out again: yet the Artery being divided, it soon stopt by the application of *Colcothar*, and from that time it bled no more. The ancient way of Deligation is, as I have already said, by tying it in two distinct places, and cutting the Artery off between: but the Patient's often fainting interrupted us in that work. And truly in this case, where a Barber was to be intrusted with the Cure, it had been better that the Artery had not been divided; for then it would not have been in his power to have rubb'd off the Ligature, and before the Wound could have been ready to cicatrize, the Ligature would have fallen off of it self, without danger of bleeding.

C H A P. III.

Of Wounds of the Nerves, Tendons and Ligaments.

Nerves may be many ways wounded, *viz.* by Scission, or Puncture: The former way they are usually cut thro', and then occasion no new consideration in Chirurgery, because they wholly cease from action and are irrecoverable: but when prickt by a sharp-pointed Weapon, which kind of wound is called a Puncture, they are much to be regarded. So also Tendons: not the small Fibres of them, (which are in every wound of the Flethy parts,) but the main body of them, (which usually make up either the tail or head of a Muscle. If you would know whether these are wounded or not, consider the place wounded, *viz.* whether near the Joynt in the inside of the Arm or Leg, or the end of the Muscle, or in the Tendonous parts of the Hand and Foot.

The *Symptoms* are, great Pain and Inflammation, also a contraction and hardness in the Nerve or Tendon. But if the Nerve be quite divided, the pain is little, only a kind of *Stupor* or Numbedness. According as the Nerve is more or less considerable, so also the particular Part is lame more or less.

The most frequent Wounds of Nerves, and most to be taken care of in Chirurgery, being Punctures, I shall instance in them, and chuse the most common, *viz.* those which are made accidentally by letting blood. And here by the way you must take notice, that, in letting blood, sometimes the Apertion happens to be made, when the Skin, by reason of the Bandage, or Position of the Arm, lies equal with the Vein, yet afterwards is not so; or the Apertion is made too small in the Skin, so that part of the blood is choakt in, and lies there extravasated, whence a small *Phlegmon* ariseth: or it may happen in some that are well let blood, that yet through the indisposition or ill Habit of body, the Part prickt festers, (as they usually say,) and groweth sore a day or two after, and, if neglected, may raise a Tumour, which lying upon the Nerve or Tendon, may at that time contract the Arm. If a Boil in a Flethy part be painful, then much more those in the Joynts amongst the Nerves and Tendons.

Such

The Wounds of the Nerves and Tendons.

Signs.

Ill consequences of bleeding not always from a prick of a Nerve or Tendon.

Such Accidents have and will happen to all that let blood, whether Physicians or Chirurgeons: Which is the reason that some of our old experienced Chirurgeons did, after letting blood, always apply a Pledgit of *basilicon* upon the Aperture with *emplastr. diachalcit.* over it, which by its digestive quality secured it from corrupting. But we by a contrary way, as by a little Compress dipt in Water, endeavour to restrain the flowing of the hot *Serum* to the Aperture; and we should be laught at if we continued that old method of Dressing. At the time we let people blood, they are commonly labouring under some great Fermentation, or apprehend it so: no wonder then if it sometimes fall upon the Part, where it was invited by Bandage. I have been sent for into the Country to a person, that, after a letting blood, was seized with an *Erysipelas* or bilious Inflammation the whole length of the Arm. The Aperture in the Vein might possibly be the cause; but that place was not afflicted at all. Dr. Ringal complained once of a Chirurgeon, who was so unconscionable, as he said, to ask five pounds for curing an Arm he had made fore by his letting Blood. But I hope no person is so ignorant or malicious, to impute such Accidents to a Puncture of the Nerve or Tendon.

For when they are really prickt, their Symptoms (as you may read in all those that have writ of them) are sudden, with vehement Pain, Faintings, Convulsions, and attended with great Defluitions. They do not terminate presently in Suppuration, but gleet, and will not yield to a simple anodyne Cataplasm of White-bread and Milk.

Prognostick.

All Wounds of the Nerves and Tendons are dangerous, but more or less according as they are of use. Those of the Nerves are attended with the severest Symptoms, and seize the Patient more suddenly. But whether it be Nerve or Tendon, the transverse Wound is most dangerous, and difficult of Cure.

Cure.

In order to their Cure, there are other considerations required; and in the first place, whether the Nerve or Tendon lie open in view, or under coverture of the Skin. If they lie covered under the Skin or *Membrana adiposa*, then you ought to open the Skin, that the Medicaments may penetrate to the wounded Nerve or Tendon. Your Medicaments proper in these Grievances ought to be such as are of hot, dry and subtle parts, to consume that Ichorous water which first affects them, and causeth the Putrefaction. In the beginning use *ol. ros.* with a little Bay-salt dissolved and dropt into the Part scalding hot; upon which may be applied a Pledgit spread with *basilicon* dipt in the same Oil, and the Part embrocated about *cum ol. lumbric.* and *emplastr. è bolo* over it as a Defensive. But if the Inflammation and Tumour be great, apply this Cataplasm: *Rx farinae hord. & fabar. an. ʒiv. sem. lini & fenugraci pulv. an. ʒj. flor. ros. rub. flor. cham. sambuci, & summit. absinth. an. ʒiiij.* boil these in Wine, or in common *Lixivium*, adding *oxymel. ʒiiij. ol. ros. ʒj. Misc.* so rowl up the Part gently. If there be much Pain, dress it twice a day. If the Part requires Medicaments of more drying and subtle parts, dress with *balsam. sulphuris terebinth.* or else, *Rx ol. sabinae & terebinth. ʒij. Misc.* or *oleum costinum, rutæ sabinae, aneth. scorpion. &c.* These are all proper Medicaments to dress them with; but *ol. ros.* and Salt have always served my Purpose.

Caution.

In your application of Medicaments you must consider what degree of heat and ficcidity is proper for the offended Nerve or Tendon. If in your use of these Medicaments your Patient feels not the heat of them, or feels it vehemently, they are not then rightly fitted, for in the former case they do not enough dry that *Sanies*; in the latter they do inflame the part. If the Patient feel the heat moderately, the Medicine is good: but if from the use of the Medicine the Part itch and smart, and the Aperture made by Puncture gape, then the Medicament is stronger than it should be. If the hardness go off with the contraction, and the Lips of the Wound relax, 'tis a good sign. I shall give you one Observation for the farther confirmation,

A

A Young Chirurgeon having accidentally prickt a Tendon in letting a Maid blood in the *Saphena* near the Ankle, he dress'd it up with *ol. terebinth.* hot. Her pain increasing, I was consulted, and saw the Chirurgeon ready to apply his hot Oils: but upon sight of the Wound, the Lips being turgid and dry, also the Parts about inflamed, I shewed him his Error, and prevailed with him to dress it with *unguent. basilic.* warm, and to embrocate *cum ol. ros.* also to apply *emp. diapalm.* malax'd with some of the same Oil, and to forbear dressing it 2 or 3 days: during which she was cured. The over-using hot Oils hath been in these cases very mischievous to many.

If they yield not to cure by such Medicaments as have been propos'd, then you ought to divide them, to prevent worse Accidents, *viz.* Convulsions, Spasms, Gangrene, &c. After which they cure as other Wounds; only require more care in the position, and keeping the Member steady, if it be in such a Joynt where there are Nerves and Tendons that move contrariwise.

The Ligaments require much one method with the Tendons; only your Medicaments are here to be more drying, as *euphorbium, sulphur. viv. calx lota, tutia, &c.*

Cure of Ligaments wounded the same with Tendons.

1. Observat. of a wound in the inside of the Wrist.

A Youth about ten years of age, one day in the Sessions-yard leaning over the spiked Pales to see the Malefactors, was suddenly frighted down by the Marshal's men: in his falling he was catcht by one of those Spikes in the middle of the Wrist, it passing between the Bone and Tendons: he hung thereby till he was taken down. They carried him home, and fetcht me. I found the Tendons stretcht out to a great length, some of them broken and torn in pieces, and one of the Bones of the *Carpus* lying loose in the Wound; which I took out, and cleansing the Wound, placed the shattered and over-stretcht Tendons within it, and made my first Stitch in the middle, bringing the Lips as close together as I could. Then I made two stitches more, on each side one, dressing him up with a Digestive *ex terebinth. &c.* dipt in this following Balsam; *R. terebinth. lbij. olei olivar. lbij. ol. laurini ℥iv. cinnamom. ℥iij. euphorbi, garyophyll. baccar. juniper. an. ℥j. gumm. bederae, sagapeni, ammoniaci, opopanax, galbani, an. ℥j. myrrae mastich. colophonie pulv. an. ℥iij. distillent. pro usu.* Over this I applied *empl. è bolo,* with a Compress dipt in Oxycrate, and so rowled up the Member. Some hours after I let him blood, and gave him that night a Draught of *aq. paralyseos* with *syr. de meconio & aq. cardiac. cochl. iij.* He rested ill that night, and in the morning was full of pain. I took off the bandage, and bathed the affected Member with *decoct. rad. althae, malvar. violar. cham. verbasco. hyoscyam.* and applied a Cataplasim over the Dressings of *farin. hord. fabar. flor. ros. rub. balauft.* decocted in Oxymel, with the addition of *ol. lumbric. & rosar.* The next day his pain was much mitigated, the Tendons all drawn up, and the Stitches loose. I thought to have drawn the Lips close, but found them too painful to admit of it; therefore I cut the Stitches out, and brought them as close as they easily would come, dressing up the Wound as before. After some few days, the Wound being tolerably digested, I dress'd it with Unguent dipt in the former balsam, and applied over the Wound *empl. diasulphuris, Rulandii,* with Bandage and Compress as before. *R. terebinth. resina pin. ol. hyperici, an. ℥iv. sarcocollae, myrrhae, thuris, an. ℥iij. cerae. q. s. fiat Unguentum S. A.* Thus I happily deterged and incarned, and by *unguent. tutiae* and my ordinary Epuloticks cicatrized the Wound; and some while after he recovered the use of his Hand.

A Coachman was wounded transverse the back of his Wrist, deep into the Joynt, so that his Hand doubled inward. I caus'd a *Ferula* to be placed under his Hand to support it; then searching the Wound, pull'd out many fragments of Bones: and having cleansed it, I brought the Lips together by three distinct

3. Observat. of a wound on the inside of the Wrist into the Joynt.

bind Stitches, leaving a vent for Matter in the ends of the Wound, which were both depending. Then I sprinkled the Powders of Myrrh, Aloes, *Thus*, &c. upon the Suture, and applied a Digestive *ex terebinth. cum vitello ovi* on the rest of the Wound, with a Defensative over all, and rowl'd it up. Then I let him blood, and prescribed him *3vj. syr. de meconio* in a draught of Mace-ale for his Supper, with hopes to dispose him to rest. But he slept little that night. The second day after I took off dressings, and fomented the Wound and Parts about with an emollient Decoction, as in the former Chapter, and drest up his Wound with Digestives as before, embrocating the Parts about with *ol. lumbric.* and applying *empl. è bolo* over the Wound and adjacent Parts. It digested in the declining ends a little, but continued painful, especially in the Fingers. The third day after, dressing him again, and seeing the Wound digested, I took out the Stitches, and drest the Wound with my Digestive of *terebinth.* dipt in my formerly mentioned Balsam, applying a Cataplasim warm over all the Wound and Hand, as in the former Observation hath been set down; then rowl'd up the Member again. At the next dressing there appeared more Inflammation; yet the Wound was not altogether well digested, nor did the sticht Lips seem to incarn, but thrust forth a soft white Flesh: wherefore I cut the Stitches, and digested with *Merc. præcipitat.* and laid Pledgits spread with *mundif. ex apio*, with a Cataplasim as before over all. Thus I deterged, and afterwards incarned with the common Sarcotick, and with *calx lota* cicatrized it. Then I put on a Catagmatick Emplaster, and by the use of a laced Glove scattered the pituitous Swelling, and strengthened it. Yet it continued long painful, and so extremely weak, that he was necessitated to support it a long time by wearing the *Ferula*. Since the writing of this I am informed he continues in the same Service; his Wrist is stiff, but serves him to drive his Coach.

2. Observation of a Finger bit off by a Horse.

A Gentleman aged 54 years, of an ill Habit of body, passing in the Street by a Coach, one of the Horses snapt of the end of his Finger with the Glove. I drest the Stump with the common Digestive dipt in a little *ol. ros.* warm and with *emplast. diachalcit.* malaxed with a little of the same Oil, and rowled up the Stump. This Patient kept not his house with this little hurt, but came to be drest once in 2 or 3 days, or drest himself; he not thinking it worth the observation of Diet, Bleeding, or the like. One day he came to me complaining that his Finger would not heal. I looked upon it, and seeing an undigested crude *Ichor* dropping from it, and the Parts about blistered, I scarified them, and dabbled the Wound with *ol. terebinth.* warm, strewing *Merc. præcipitat.* over all, and dressing it up with Pledgits dipt in *basilic.* &c. then rowling it up with *empl. diachalcit.* That night I went to his Lodging with a Fomentation and other Medicaments prepared for a Mortification, but found it checkt; so I continued the application of *unguent. basilic.* and *ol. terebinth.* and afterward let him blood, and purged him with *infus. senæ*, &c. After the Wound was well digest, I incarned and cicatrized the Stump by such Medicaments as in the former Observation have been set down. Thus sometimes great mischiefs attend little Wounds, through the contempt some of our Patients have of them.

CHAP. IV.

Of Wounds of the Face.

1. Observation of wounds in the Forehead and Eye-brow.

A Lady was wounded down the whole length of the Forehead to the Nose, also transverse the left Eye-brow to the Temporal Muscle; her

her Eye and Face were also much bruised. It happened to her travelling in a Hackney-Coach, upon the jetting whereof she was thrown out of the hinder Seat against a Bar of Iron in the forepart of the Coach. At the first sight of the wound in her Forehead, seeing the Bone bare and herself so disturbed, I doubted whether I should stitch it, or keep it open with Dossils: but seeing no Fissure or inequality in the Bone, and considering the Deformity in that place would be great, I brought the Lips of the Wound close together with one Stitch, and dressed it with Sarcoticks, resolving, if any Symptom prognosticated ill, to cut the Stitch, and lay it open again; but if there were none, then at the next dressing to bring the Lips of the wound nearer by dry Stitches. On the Eye brow I made four Stitches, at such distance as they might be able to retain the Lips together, taking in a triangular piece of Skin that was divided by a wound above it, which rendered it not unlike a double Hair-Lip. Then I dressed up the wounds with *Arceus's Liniment* and *empl. è bolo*, with a Compress dipt in *Oxycrate*, and made my Bandage over all. Having thus drest her wounds, I caused some *aq. ros. rub. cum alb. ovi* to be beaten together, and dropt in her Eye; then applied soft folds of Linen wet in the same Mixture over that diseased Eye, and an *empl. è bolo* over her Cheek, forbearing the Bleeding her that night, in consideration that she had bled the space of five miles in her returning back to London. The second day after I took off the Dressings, and finding less suspicion of Fracture or Fissure in the wound of her Forehead, I brought the Lips of that wound together with dry Stitches, and strengthened those Sutures of the Eye-brow by the same Medicament, lest the continual motion of the Lid should relax them: then I drest it up as before, and made the Bandage begin behind, bringing both the heads of the Rowler forward, passing one by another, to press the Lips of the wound in the Forehead close together, and drest her Eye with *aq. pomor. matur.* wherein a few grains of Vitriol were dissolved; by which I removed the Suffusion upon the Cornea. Then I applied upon her bruised Cheek Pulp of the Roots of Orpin beaten in a Mortar, with the White of an egg. Two days after I drest her again, and finding that the dry Stitches kept those Lips of the wound close together, I cut off the other, and drest her with sarcotick Powders, which supplied the place of Epuloticks; and that morning I let her blood in the Arm about ten ounces, and purged her the day after with *infus. senæ. rhab. &c.* By this the Defluxion was removed, and in the space of seven days the wounds were all perfectly cured, and she returned back the eighth day.

A Servant of a Nobleman was wounded on the right Cheek over the *Oz. zygoma*, down the Muscles of the same Cheek. In cleansing of the wound, I felt a piece of that Bone, which had been cut off by a slanting blow; it hung only by some fleshy Fibres in the wound. I took it out, and, in consideration the Part would not well admit of Bandage, I made two Stitches, bringing the Lips of the wound even together, then sprinkled the Suture with sarcotick Powders, and drest it up as the former. The third day after, taking off Dressings, and finding his wound agglutinated, I cut out the Stitches, and drest him with some of the same Agglutinatives as before. Two days after, dressing him again, I found his wound perfectly cured.

Whilst I served amongst the *Dunkirkers*, where *Snick and Snee* was as it were a fashion, I had much of this sort of work; and for your diversion shall set you down one Instance in that kind.

Whilst our Squadron rode at Anchor in the Groin, there came in some *Hollanders*, under the notion of *Hamburgers*, with three Ships new trimm'd up for the King of Spain's Service. A Boatswain of one of these Ships happened in company ashore with some of our men, where drinking together,

2. Observation of a wound in the right Cheek.

3. Observation of a Dutch Hamburger mark with a cross on the right Cheek.

344 *Of Wounds penetrating the Oesophagus, &c.* BOOK V.

the *Hollander* began to prate of Religion, upbraiding one of our men for wearing a Cross; and after a while, growing more heated with drink, he became quarrelsome, and swore *Sacrament* he would not wear a Cross, no, the Devil take him, repeating it often. One of our men beat him down, and fell with him; then kneeling upon his breast, and holding his head down, he drew out a Knife sticking in his Sash, cut him from the Ear towards the Mouth, then from the *Os zygoma* to the neather Jaw. Now, said he, *you shall wear a Cross, that the Devil do not carry you away.* I was sent for from the next house as a friend to that Religion, and sticht the lips of the Wound close together; then sprinkling them with a little *pulv. Galeni*, applied Pledgits with a *sarcotick Unguent*, and with Astringents and Bandage dressed him up. The next morning he was let blood, and the third day after I took off the Dressings, and finding the Wound as it were agglutinated in the Slits, I cut out some of the Stitches, sprinkled the Wound as at first, and dressed him up with Sarcoticks, with Compress and Bandage. The second day after I drest him again, and cut out the remaining Stitches; and in a dressing or two more cured him. This being the work of Nature, who rarely faileth in acting her part, if we perform ours, in retaining the Lips close together, and defending them from Fluxion. The Patient was well pleased with his Cure, though there remained some marks of a Cross. These sort of people wearing them with much pride in their Faces, as marks of their Courage.

CHAP. V.

Of Wounds penetrating the Oesophagus and Aspera Arteria.

Wounds penetrating the *Oesophagus* and *Aspera Arteria* require to be stitched close, especially those of the *Oesophagus*, where the sustenance and *Saliva* so continually presseth into it. Therefore if your stitches slacken before the internal Wound be agglutinated, you ought to make new stitches, or pass Needles or Pins through the Lips of the Wound, and with strong Thread twisted about them, as in a Hair-lip, keep them close together, till the Wound be united. During which, dress it up with Agglutinatives, and prescribe a thin Diet; so shall you cure the Wound in few days, whenas otherwise observe what followeth.

Observat.
of a wound
in the Gullet.

A Child of about six years of age, playing with a wooden Dagger, fell upon it, and wounded himself into the *Oesophagus* or Gullet, so as his *Saliva* froathed out of the Wound. I being fetched, stitched up the Wound, and applied Astringents, with Compress and retentive Bandage, then put him into bed, and let him blood in the Arm, advising a Lambative of *album. ovor. rec. cum sacchar. alb.* to be taken as necessity should require, with directions to abstain from all other Sustenance till the next morning. At which time visiting him again, I was told their Chirurgion had taken off my Dressings, cut off the stitches, and given a great liberty in Diet. I wondered what peculiar Art he had in curing that Wound. But about a Month after, I was informed he had been foiled in the Cure, and had left it to Nature; and that the Child was fed with Pudding, and such soft Food, part whereof came daily out at his Wound.

CHAP.

C H A P. VI.

Of Wounds of the Limbs.

ONE of our Mariners in *Spain*, fighting on shoar, was thrust with a Rapier into the outside of the Arm nigh the *Biceps*. A Chirurgeon in the Town seeing him bleed much, stich'd the Wound close, and applied his Restrictives, rowling up the Part well. After three or four days, the Patient came abroad, and being in pain, desired me to dress him. The Arm being swelled and inflamed, I cut the Stitches open, and gave vent to a bloody *Sanies*, after which followed a digestive Matter. Finding by search with my Probe the Wound wanted little of passing through, I embrocated and dressed it up with a short Tent armed with my common Digestive, and endeavoured by good Bandage to cure it. But it not yielding thereto, I passed a Seton-needle through, discharging the Matter downward, and after that Apertion was digested, I dilated it, and kept a Tent there a few days, during which, the upper part of the Wound healed up; and the Wound below digesting well, and the Matter daily lessening, I also healed that up. This I insert to shew you that such Wounds ought not to be sticht, but dressed up with Astringents, Compress and Bandage; for so these Wounds in a good habit of body, with Compress and Bandage; do frequently agglutinate in a few days; whereas dressed by Tents they are of longer continuance, and rendered at last difficult of Cure.

1. Observat. of a puncture of the Arm.

While I was in the *King's* Service in the time of War in the West Country, I was fetched to Captain M. who in fighting a Duel was run through the Thigh with a broad Sword: I was also sent for at the same time to the other. I hastily dressed this Officer's Thigh with Pledgits spread with Sarcoticks, and some astringent Powders mixt with the whites of Eggs, applying them over both the Orifices, and bringing the Lips of them close, with Compress and Bandage, and so left him to be by his Servants put to bed. From thence I went to dress the other, who had many little Wounds on his Fingers, Hands, and Head. At my return I visited my former Patient, whom I found in his bed with little pain. The second day after I attended him, and finding all in good temper, without pain or swelling, I dressed the Wounds as I had done before, there being good Signs that they would heal up by Agglutination; for there was little either of Matter, Pain or Swelling. If it had appeared inflamed with Tumour or Pain, I ought then to have dilated the Orifice most distempered: and if they had both suffered, I might have kept them both open with small short Tents spread with the Common Digestives, and have let him bleed, and proceeded as in a Body ill habited; but there was no need, there only required a quiet position of the Part, which he submitted to, and was happily cured in 7 or 8 days. This was really performed by the Balsam of his blood; I neither bleeding nor purging him in the time of his Cure.

2. Observat. of a wound in the Thigh.

A fat Gentleman came from *Rochester* wounded in the Thigh with a Tuck. It was much inflamed, by reason of the Tent in it, which was very long; his young Chirurgeon supposing the Wound could not be cured unless the Tent reached to the bottom of it. I threw out the Tent, and dressed the Wound with a Pledgit of *unguent. basilic.* embrocated it with *ol. ros.* and applied *empl. de bola*, then let him bleed. He being feverish, I also prescribed a Clyster, and sent him an Anodyne draught to dispose him to rest that night. The next Day I found him in good temper, and his Wound inclined to heal. I dressed

3. Observat. of a wound in the Thigh.

it as the day before, and advised him to keep his Bed 3 or 4 days. About 2 days after, I visited him again, and taking off the Dressings, saw his Wounds perfectly cured: so it continued, and he walked abroad the next day.

4. Observat.
of a wound in
the Arm.

A person was wounded in the inside of the Arm, the Sword passing over the Joynt slanting to the outside of the Arm. He was first drest by a Chirurgion near the place where he was hurt, and had bled much. The next day he complaining of pain, I opened the Wound, and found it tented on both Orifices, the Arm swelled, and a little disturbed; as Wounds in that place are subject to be, when the blood is shut in by Tents, and not drest rationally by Astringents and good Bandage. The Swelling was most between the two Orifices, and appeared afterwards to be the blood choaked in by the streightness of the Bandage, and was not likely to yield otherwise than by Suppuration. I fomented the wounded Member with Discutients, and kept both the Orifices open with small Tents dipt in the common Digestive, embrocating the Parts about *cum ol. ros. & gutt. aliquot aceti*, and applying over all *empl. e bolo*. The third dressing there appeared blood from that Orifice in the inside of the Arm. I filled it with Præcipitate upon a Dossil, and drest the Wounds up as before; then acquainted the Patient with my thought of Opening the Swelling between the two Orifices, there being no likelihood the Matter could discharge it self by either of them, yet it was not safe to heal them up. Wherefore I opened the Tumour lying between them by a little Caustick, and discharged a grumous blood with a corrupt Serum. From that time I left off the use of Tents, and healed that Wound up in 4 or 5 days; and as the Escar separated, the Ulcer digested, and I cured that latter Opening soon after. That the Bone was bare under the Tumour, may I suppose yet be felt, from the adhesion of the musculous Flesh to it.

5. Observat.
of a wound in
the Leg.

A person was wounded in the outside of the right Leg below the Gartering place, the Wound running upward. After 6 weeks dressing by the neighbouring Chirurgions, the Wound being much disturbed by a Flux of Humours, I was consulted, and found it sinuous (some 2 inches) upward, and accompanied with Inflammation and Tumour. The small of the Leg and Foot were œdematous, and the whole Member so weakened by the Influx, that it was neither able to assimilate its Aliment, nor yet to resist the Crudities that fell upon it, and so was like to be of difficult Cure: In order to which I laid open part of the Sinus by Incision, and deterged the Wound with *mundif. Paracelsi*, mixt with *Merc. præcipitat.* embrocating the Parts about with *ol. ros. cum aceto*, and applying *cerat. Galeni* over the inflamed Tumour. I fomented the œdematous Tumour with a Decoction of *absinth. scord. flor. sambuci, cham. rubr. bacc. myrtill. & balauft.* and applied over the Swelling a mixture of *empl. diachalcit. & stict. Paracelsi*, with good Bandage, not renewing those Dressings more than once a week, to give a breathing to it. By the aforesaid method of dressing, that part of the Wound which I had laid open deterged, and the Inflammation and Tumour remitted. I afterwards divided the remaining Sinus, and deterged it as the former, and with *unguent. diapompholyg. &c.* cicatrized it, by the help of a laced Stocking in the space of about a month. This person had been long kept in his Chamber by his Wound, and now supposing himself well, he rid to his Country house, (unknown to me;) but that night his Leg swelled much, and the Cicatrix being scarce confirmed, brake out again; upon sight whereof he returned back the next day, and sent for me. His Leg being inflamed, and the Cicatrix fretted quite off, I fomented the Member *cum decoct. malvar. violar. plantag. solani, & flor. ros. rub.* and endeavoured by the application of *basilicon, &c.* to digest it: but it not yielding thereto, I applied Refrigerants on the external Parts, and a fine Lawn wet in a Solution, of *troch. alb. Rhas.* made in *decoct. plantag. equiseti, &c.* over the Excoriation,

also

also *unguent. alb. camph.* over the Lawn, upon Pledgits somewhat distant from one another, lest the Matter should be shut in by the adhesion of them, and fret the *Cuticula* more off. Thus I dressed it twice aday, he keeping his Leg upon his Bed, to prevent Defluxion. By this method the heat and Acrimony of the Humour being mitigated, I applied over the Lawn Epuloticks more drying, *viz. pulv. corn. cerv. usti*, &c. and at last with much difficulty cicatrized the Ulceration: whereas if this Wound had been treated methodically in its recency, it might possibly have been cured in few days by Agglutination.

C H A P. VII.

Of Wounds of the Breast.

Wounds of the Breast are penetrating, or not. If they do penetrate, then we are to consider the depth; whether it be only between the *Mediaſtinum*, in the hollow Cavity of that, in the lower part of the Breast; or whether it penetrate into the Cavities of the *Thorax*, or what the Parts are that be hurt. How the Breast is circumscribed with the Symptoms of each Part when hurt, you may find in the following Discourse of *Gun-shot*.

The *Signs* of Wounds penetrating are discovered by the proportion of the Searching-candle or Probe, which enters into the Cavity. You may also perceive when it penetrates the Cavities of the *Thorax*, by laying a Down-feather upon the Wound, or by holding a lighted Candle near it, the Patient holding his breath the whilst. In this case the Wind (or Air) will move the Feather or Flame; if it do not blow away the one, and extinguish the other. The Air also makes a noise in its passing forth. Sometimes it is discovered by the quantity of blood discharged by the Wound or Mouth, or both, with Difficulty of breathing.

Signs of
penetrating
wounds.

Wounds in the hinder part of the *Thorax* are reckoned dangerous, by reason of the Nerves and Tendons; and if they penetrate that way, there is another danger from the great Vessels of blood, which are nearer to the Weapon in this case than in those Wounds which are made forward; yet all Wounds in the Breast are dangerous, by reason of the continual motion of the Lungs, and of the blood that falls down on the *Diaphragma*, and corrupts it. If the Lungs be wounded deep amongst the great Vessels, though they escape the first 9 days, yet they commonly terminate in a *Phthisis* or *Fistula*.

Prognostick.

A Wound in the external part of the Breast is cured as a simple Wound. If it penetrate, you are to endeavour first the restraining the blood; then that the extravasated blood be discharged; and that either by the Mouth, by Expectoration, or by the Wound, or by Urine. The way by Urine *Fabr. ab. Aquapend.* says is by a branch of the *Azygos*, which, saith he, passeth near the *Diaphragma*, by the Spine, to the Emulgents. Those that own the Circulation will hardly allow of his *Hypothesis*; however, if the matter of Fact be true, that there is sometimes a discharge by Urine, which I confess I have not yet observed in my own practice, it will be reasonable to propose, as he doth, in this case, Diureticks, as *decoct. capill. Veneris, polytrich. rad. petroselin. beton. apii, feniculi, asparagi*; also Ptisans, with *ol. sulphur. vitriol.* Barly cream, Emulsions, &c. to temperate the blood. The Ancients gave *acetum* with warm Water to restrain the present Flux, and to dissolve the concremented Blood.

Cure.

The second way is by Expectoration; and thereto serve *decoct. pe. Torale, Lohochs, syr. Ven. jujub. glycyrrhiz. oxymel*, &c. whereof the *Pharmacopœia Lond.*

Whether
the wound
is to be
kept open
or not.

Lond. is full. This I have mentioned for their sakes who cannot have a Physician. But here I leave this work to them, those Cures consisting much in their well ordering and prescribing internal Remedies; contenting my self in the Dressing of the Wound as it appertains to Chirurgery. In the treating of which there is a Question, whether the Wound should be kept open, or agglutinated. They that are for a speedy Agglutination, do urge it, lest the internal Air corrupt the Parts within, and the heat expire. They that propose the keeping them open, do design thereby a readier discharge of Matter. For, saith *Aquapendent.* if the Matter be to be discharged by Urine, it must pass into the substance of the *Pleura*, then into the Vein *Azygos*, so into the Emulgents, then to the Kidneys, and thorough the Ureters and Bladder: if by Expectoration, then it must also first pass into the substance of the Lungs, then into the *Aspera arteria* or Weasand, and from thence be coughed up, and spit out by the Mouth.

The Au-
thor's
judgment.

In my practice, in these Wounds of the Breast, I consider the Wound, how it is capable of discharging the extravasated Blood and Matter. If it be inflicted so, that the Blood or Matter may be thereby discharged, then it is to be kept open, the welfare of the Patient depending mainly upon the well dressing and governing it: but if it do not lie well for Evacuation of that extravasated Blood, then it may do hurt, and so ought to be healed up.

1. Obser-
vat. of a
penetra-
ting
wound of
the Breast.

How to
order
Tents in
penetra-
ting
wounds of
the Breast.

A Person of about 23 years of age, of a good Habit of body, being wounded into the Breast, there followed immediately a great effusion of Blood, almost to the exhausting of his Spirits. Mr. R. Chirurgeon and my self were presently sent for. We found him lodged in an Inn near *Fox-hall*, and viewed his wound. It was four fingers above the *Cartilago ensiformis*, a little to the left side: he had a small Pulse, and fainted often. Dr. *Wedderborn* and Dr. *Will. Denton* came in while we were providing Dressings. The Wound was large and penetrating. We made a soft Tent, with a Thread fastened to it; which in these Wounds you must be sure to do, lest you lose it in the Body. This Tent we dipt in a Mixture of Powder composed of *bol. Armen. sang. dracon. thus, mastich. &c. cum albumine ovi*, and applied over it a Pledgit spread with the same, also *empl. è bolo*, with convenient Bandage. The Physicians prescribed internally such things as restrained the Bleeding, and were proper to resolve the concremented Blood, and withal to relieve his fainting Spirits. That night he rested ill. The next day when we met, seeing him labour under great Difficulty of breathing, with pain above the *Diaphragma*, his Pulse quick, little Urine, and that high coloured, we agreed he should be let blood presently; which was done accordingly in the left Arm. The Blood flowing with a quick stream, we took away about 6 or 7 Ounces, a mere *Serum*: but the Patient was relieved by it. We then took off our Dressings, to look upon the Wound, whereupon we found some Blood and *Sanies* discharged. We dressed him with *terebinth. lot. in succo lamii*, adding some of the former Powders *cum vitel. ovi* upon a Tent as before, with a Plaister and Bandage over it. Thus we continued to dress him until we saw the Bleeding cease. After which there was nothing for us to do, but to further the discharge of Matter from within, by keeping the Wound open until it lessened, and the ill Symptoms went off: the casting in of liquid Medicaments, which are not easily to be gotten out again, being very destructive. Therefore we diligently attended in assisting Nature, by keeping a way open for the Evacuation of what was extravasated and corrupted within the Cavity, committing the Cure to her; who indeed acted her part so well, that in few days the Wound agglutinated within: and we thereupon leaving off the use of the Tent, cured the external wound in few weeks by the common Sarcoticks, leaving him in perfect health, which he yet enjoyeth.

Another

Another person was wounded into the Breast below the fourth Rib on the right side. He coughed up much Blood at times. Sir *Fra. Pru.* was his Physician, who prescribed him Ptisans, pectoral Decoctions, &c. by which and frequent Phlebotomy the Symptoms went off. After the Wound digested, the Patient rambled abroad, and was cured by such Dressings as I left for him at his Chamber. I seeing him no more until he was wounded again.

Another was wounded in the right Breast, coughing up much Blood, with great Pain and Difficulty of breathing. I took away 10 Ounces of Blood presently, and ordering him (it being then night) some *syr. de meconio* & *jajub.* in a Draught of *aq. papaver.* with a few drops *spir. sulphuris.* He slept well that night, and against the morning he had *decoct. pectoral. com.* (the hotter Herbs left out,) sweetned with *syr. de. ros. succ.* & *jajub.* of which he drank in the morning, and at other times as he listed. By his disorder he frequently relapsed, and coughed up Blood at times: I let him Blood as often, and kept his Wound open and digested. But he relapsing again, I began to be sick of him, and dealt with him to send for a Physician. Sir *Ed. Graves* was consulted, who saw his Wound almost cured. We repeated Venesection; and from that time he recovered, and continued well.

A Footman was wounded into the left Side: he cough'd Blood, and discharged much by the Wound. A Servant of mine dressed him with a Tent, by which the Bleeding was stopt from flowing thereout: and by letting him blood in the Arm, the Coughing of blood was checked. The other Symptoms were afterwards removed by Dr. *Walter Needham's* Prescriptions: Some few days after, a Tumour arising about the Wound, I gave him a visit, and felt the swelled Parts crackle under my fingers. Concluding it Wind got out from the Cavity within the *Thorax.* I made an Incision into the Swelling about an inch long, by which the Wind was discharged. We digested the Wound *cum terebinth.* &c. and kept it open two or three Dressings, till the Penetration into the Breast was incured; then lessened the Dressing, and healed it as in the former Observations hath been shewed.

A Gentleman of about 23 years of age, of a full Body, was wounded in the Breast and right Arm. He was carried into the next house, and dressed by a French Chirurgion. The next morning I found him much afflicted with a Colick and *Dysuria.* These Symptoms happening thus upon his Wounds, gave some occasion to think they proceeded from the Wound inflicted on the Breast; but were indeed the Effects of his ill Habit of body and manner of living, for he had been a Good fellow, and at that time over-warmed with Drink, and had lain upon a Pallet that night in a cold Chamber, which together seemed cause sufficient for his complaint: however Bleeding was repeated. Fomentations were also applied to the *Abdomen,* Clysters administered, and all things done which were proper in such cases; Purging excepted, in consideration of his Wounds: the one whereof was said to be on the Region of the Heart, and the other in the Artery of the Arm. The third day after we prepared to dress his Wounds, and found the one lying upon the *Sternum,* penetrating under the Skin to the *Cartilago ensiformis,* whereout we pull'd a Tent, near 2 Inches long, and proportionably big. The other was a Puncture on the outside of the Arm, with a Tent crowded into it. I dressed this latter Wound with a Pledgit spread with a Digestive *ex terebinth.* & *empl. è bolo,* and in two or three Dressings cured it. To the other I applied some of the same Digestive upon a small Tent; and having embrocated the adjacent Parts with *ol. ros.* I used *empl. è bolo* with Compress and Bandage, and designed that way to cure it. But the *Sinus* being depending, and the Wound disturbed by the unreasonable great Tent, hindered the Agglutination: wherefore

3. Observat.
var. of a
wound in
the right
Breast.

3. Observat.
var. of a
wound in
the right
Breast.

4. Observat.
var. of a
wound in
the left
Side.

5. Observat.
var. of
wounds in
the Breast
and right
Arm.

after a Dressing or two I snipt it open with a Pair of Probe-scissors, and cured it by incarning, &c. The Wounds appearing so inconsiderable, the Patient was purged, and the *Dysuria* remitted: but a few hours after he was seized with a pain in his left Hip, for which he was again let Blood, Plaisters were applied, and Purging repeated. But after all, a *Diarrhœa* happened, which freed him of the Sciatick pain. Being thus relieved, he observed no longer the strict Rules prescribed him, but took the liberty to eat and drink as he listed, and attributed his Recovery to that.

6. Observation of a wound through the Body.

A person run through the Body the breadth of three fingers under the right Clavicle, and out below the *Scapula*, was first dressed by a Chirurgion near the place where he was wounded. I came some hours after, and found him in bed faint and weak, but without Pain or Difficulty of breathing. The next day I met Dr. Bacon Physician, and Mr. Shocque Chirurgion to his Highness Prince Rupert. The Patient had rested very ill the preceding night, his wound in his Back had bled very much, even quite through the Bed; he had also souled many Napkins in coughing up Blood. We took the Dressings off the wound in his Breast, from whence there had been some Blood discharged, and more came out soon after. I dressed up the wound with a short Tent dipt in a little *terebinth. cum farin. volatili*, and a few of our Agglutinative Powders mixed with the Yolk of an Egg, and applied *empl. diachalcit.* over it. The other wound under the *Scapula* was painful, but so small, that it was not reasonable in our judgment to keep it open. We therefore laid a Pledgit of the same Mixture with a Plaister upon that, and from that time dressed it no more; but dressed the wound in his Breast daily, and repeated Venesection as occasioned offered. The third day he cough'd up Blood, and some little issued from his wound that day and the next. Four or five days after I waited upon him to his Lodgings in London: by the way he cough'd some Blood, and so more or less day and night; but by the care of his Physicians it lessened daily, and his wound being better digested, I kept the Orifice open by a short hollow Tent made of a Sparadroe, which was composed of *resin. pin. gum. ammoniac. bdellium, galban. terebinth. & cera*, with *pulv. ireos*, dipping it in a little *mel ros.* This way of Dressing I continued until the coughing of Blood diminished, from 12 Napkins in a day and night to 10, 8, 7, 4, 2, 1; yea to 1 in a week. After I saw no Blood one way or other, nor any Symptom of ill, I desired his Physicians and others might be consulted together and severally; and having all their positive Judgments for throwing out the Tent, and healing up the wound, I did so, and in a week more cured him. Five or six days after he sent me his thanks, by his Servant: after which I made him a visit, and there met Dr. Willis, who inquiring of me whether his wounds were cured. I desired the Patient that he would shew the Doctor whether they were or not. He presently stript himself of his Shirt, and shewed the Doctor, who both saw and felt the *Cicatrices*, and replied, They are well.

7. Observation of a wound in the Breast.

A Young man wounded in the Breast, labouring under very great Pain and Difficulty of breathing, with a Cough, sent for me late one night and shewed me some little Blood he had then cough'd up. He had been wounded the night before by a man standing at a Door some steps higher than himself, as it were over him, thrusting his Rapier into his Breast, within two fingers breadth of the right Clavicle, downward into the Lungs. The Patient ran into that House bleeding much, and was seized with such Difficulty of breathing, that he was forced to stretch his Arms at length over his Head, and without which doing he could not breath. He had been let blood twice, and prescribed Ptisans, &c. but for all this he was very little relieved. I presently let

let him blood about 10 Ounces, and ordered the Apothecary to give him a draught of *aq. papaver. cum syr. de meconio & de ros. siccis*, with a little *aq. Saxoniae frigid.* and against the next morning appointed them to send for a Physician to meet me. They did so. When I came in the morning, I found the Patient marvellously relieved, and resolved to remove him (he being then in *Scotland-Yard*) to his Lodgings in *Wild-street*. In the presence of his Physician Dr. St. I took off the Dressings, found his wound small, and healed up within, but not cicatrized: which if it had, yet the wound was so much below this without, that it was not capable of discharging the Matter, and so not worth my attendance, their Cure indeed consisting in internal Prescriptions. However he continued me with his Physician, and we bled him again, taking away about zviij of blood, and proceeded in the method of Cure usual in such cases. That afternoon the Patient, unknown to me, pursued his intention of removing to his old Lodging in *Wild-street*, where going up three pair of Stairs to his Chamber, he relapt into the former Difficulty of breathing, with pain, and cought much blood. The morning after we met there together again. The Patient seemed to us quite spent, labouring under great oppression; and by his pains about the *Diaphragma* and Back there was Suspicion of extravasated Blood. We bled him some 4 or 5 Ounces more, and repeated Embrocations, Lohochs, pectoral Decoctions, &c. and got off this Difficulty in 5 or 6 days: then I left him. But after that by disorder he relapted again, yet was freed again the same way by his Physician, and recovered to be hang'd at last.

Of all these wounded Patients, and many more I have helpt to cure, I never saw any that I could say passed their Disease by Urine, nor many of them that vented their Urine well during the time of their lying under these Wounds; nor have I often seen them who recover expectorate any such quantity of Matter, as might be thought to proceed from the great quantity of Blood extravasated. They cought fresh Blood most of them, like to what they discharged from their Wounds, but more florid.

The Author's Observation concerning the discharge of the *Serous* of the Breast by Urine.

C H A P. VIII.

Of Wounds of the Belly.

WE shall now say somewhat of the Wounds of the *Belly*: the Description whereof you will find set down in the Discourse of *Gun-shot-wounds*, with the Symptoms that attend the Wounds of each particular Part that shall happen to be hurt in it.

Wounds of the Belly either penetrate, or not. The Wounds not penetrating are such as reach no farther inward than to the *Peritoneum*. If the *Peritoneum* be also cut through, it is reckoned a penetrating Wound, in which case, if the Wound be large, the *Omentum* or Intestines slip out. These penetrating Wounds are also frequently accompanied with Hurt of some of the contained Parts, *viz.* the Intestines, Stomach, Liver, Spleen, &c.

If the Penetration be large, it is discovered by the thrusting out of the Kell or Gut. If the Wound be small, you must search it with your Probe. What internal *Viscera* are wounded, may be guessed by the external Part hurt, but more certainly by their peculiar Symptoms.

Wounds not penetrating are without danger. Those in the middle of the Belly are worst, by reason of the Nervous body that lieth there, and consequently

Signs.
Prognostick.

quently more painful to be stitched, and difficulter of Cure, by reason of the Intestines and Kell pressing most upon that Part. If any of the internal *Viscera* be hurt, the danger is great, all such cases being accounted mortal.

Cure.

Wounds not penetrating are cured as other wounds of the Flesh: but those which do penetrate require other manner of handling. If the Intestines or *Omentum* do thrust out, you must speedily reduce them, lest the former inflate, or the latter over cool and corrupt. But if the Gut be so puffed out that you cannot return it in, you ought to foment it with warm Water, Red wine, or some discutient Decoction *ex summit. origan. puleg. fol. beton. salvia. flor. cham. sem. anethi, fenic. dul. anis. &c.* If by such means you cannot reduce it, you must enlarge the wound by Incision, and restore it to its place.

If the *Omentum* be split out and tainted by the Air, make a Ligature above the solid part, and cut it off; then stitch up the wound, leaving the ends of the Ligature hanging out of it to cast off. But if it be fresh and warm, reduce it with your fingers. Authors have proposed several ways of Stitching these wounds, which I shall not trouble you with; but advise you to make your Stitches so deep, that the *Peritonæum* may be united with the Flesh: for if you fail therein, a *Hernia* must necessarily succeed.

If the penetrating wound be so small that neither *Omentum* nor Intestine slip out, (as it frequently happens when they are inflicted by Tuck or Rapier,) you may then consider what Symptoms there are of the internal *Viscera* hurt: and if there be neither Inflation of the Belly, Colick, Vomiting, or ought extraordinary by Urin or Stool, you may conclude all well; and being so, your best way will be to heal up the wound by Agglutination: for by dressing it with Tents, you may cause disturbance; and by exposing it to the external Air, Putrefaction, Colick, &c. may ensue. Therefore I think it necessary that these Wounds be healed with all expedition, and that the Patient do keep his Bed the while; for in sitting up, the weight of the Bowels will stretch the *Peritonæum*, and make way through it. And though the external Wound in the Skin do not yeild them passage, yet they will so nest themselves between it and the *Peritonæum*, as to make a *Hernia*. To prevent which, you ought to hasten the Cure, and not only to keep the Patient in Bed, but to make good Compression upon the wounds, that the Parts may unite while they are recent.

If in such a penetrating wound the Small gut be wounded, the vehement Pain, continual Vomiting of Choler, and dejection of Chyle by the wound, will discover it: but in that case, the keeping of it open to seek the Intestine will be a hard task; and when you have found it, what will it signifie, but to increase the Accidents? Therefore it will be better to follow the method of the Ancients, to embrocate all the Region of the Belly with *ol. mastich. & lumbric.* to dress the wound with Sarcoticks, and to keep it close and warm with Compress and Bandage. But if the great Intestines be wounded, and the Excrements discharge that way, it may be reasonable to lay open the wound, and stitch the Gut with the Glovers stitch, sprinkling it with some of the aforesaid Agglutinatives; and reducing it back, stitch up the external wound of the Belly, as hath been said. In all these wounds Venæsection is necessary, and may be repeated as occasion shall offer. Regulation in Diet ought to be with great moderation. Clysters may be administered after the second day of Chicken or Veal broth wherein Barly hath been boiled: to which may be added Yolks of eggs; *mel. comm.* or Sugar of red Roses, &c. Also Internals may be prescribed, *viz.* Vulnerary decoctions of *fol. plantag. equiseti, pimpinell. pilosell. rad. consolid.* to which may be added *conf. ros. rub. conf. cydonior.* *Bolus*'s may be also proper of *species diatragacanth.* with Balsamicks, Wounds
of

of the Liver, Spleen, and other *Viscera*, require to be treated much after the same manner by Internals. They ought more especially to be kept open, either for the dressing them, or for the discharge of Matter. Also Cataplasms may be applied *ex far. bord. fabar. flor. ros. rub. coct. cum hydromel.* For farther satisfaction therein, I refer you to *Wounds made by Gun-shot.*

A Man was brought to *Lambeth* wounded transverse the Belly a little below the Navel on the left side; the *Omentum* and intestines were thrust out, and kept close to the wound with a Handkerchief in his hand. The *Omentum* was much out; but not being altered by the Air, I caused warm Cloaths presently to be held upon them very close, and the patient to be placed low with his Head, and his Hips raised up; then by the help of his Friend raising them yet higher, and shaking his Body, I reduced them. After which, they having laid him down with his Hips raised, and his Body somewhat declining to the right Side, my assistant pressing with his hands something above the wound, (by which the lips of it were a little turned upward, and the *Viscera* kept down,) I prepared to stitch the wound with a strong Needle somewhat curved at the point, threaded proportionably, taking hold of the lower Lip, and passed my Needle first through the *Peritonæum*, and then to the opposite side, through the Flesh and Skin, leaving the *Peritonæum*; and so along, taking it up on one side, and leaving it on the other, till I had sowed up the wound. Then I pull'd the Stitches as close together as I could, and fastened my Thread. The wound thus sticht, I sprinkled the Stitches with *pulv. aloes, colophonia, sang. dracon. mastich. &c.* and applied Sarcoticks with a plaister over all, made up of some of the aforesaid Powders *cum. album. ovi*, and with Compress and a strong Towel braced them all fast. After a while I let him blood, and ordered him to lie quiet upon the sound Side, and to keep his body soluble by Clysters, also to be moderate in eating and drinking: I dressed him after the same manner every other day; and when the wound seemed to be cicatrized, and that my Stitches began to fret, I cut them out the eighth or ninth day; but continued the use of Sarcoticks till it was firmly cicatrized.

1. Observat. of a wound in the Abdomen.

The manner of sowing the *Peritonæum* in this case.

These wounds are not subject to great Inflammation or Defluxion; but by reason of the fatness and thickness of the Lips, and by pressing of the Kell and Guts, the stitching of the Belly is a troublesome work: and yet if the wounds be not so sticht that the *Peritonæum* and Fleshy parts may unite together, a *Hernia* will follow, as I told you, for the *Peritonæum* bears a great stress.

Therefore you must be sure to take good hold with your Stitches: and if you doubt their holding, make dry Stitches over them, with good Bandage.

A Man was wounded with a Rapier into the Belly through the right *Hypochondrium* out by the Back. I considered the wound, and saw the Orifices were small, and little advantage to be made by keeping them open: yet I put in two small Tents dipt in a little Digestive *ex terebinth. cum vitell. ovi*, and dressed them up with *empl. è bolo* and Bandage, advising him to keep his bed and be quiet. I also prescribed *3vj. syr. de meconio* mixt in a draught of *aq. papaver.* to take that night. The next morning I found him hot, and his Pulse a little disturbed, but without any Symptoms of the *Viscera* wounded; neither Tension of the Belly, Colick, Vomiting, or ought extraordinary by Urine or Stool: however I let him blood about 10 ounces, directing him a Clyster of Milk, &c. to be administred that afternoon, and at night his Anodyne was repeated. The next day I took off Dressings, and considering there was no Symptom of hurt within, only the wound a little heated by the Tents, I threw them out, and dressed both the Orifices with Pledgits spread with the above said Digestive, embrocating the parts about with *ol. ros. &c.* applying a

2. Observat. of a wound in the Belly.

Signs of the inward *Viscera* hurt by a wound of the Abdomen.

Plaister

Plaster and Bandage as before, and desiring him to keep his bed five or six days longer. I drest him afterwards again; and finding the Apertures well disposed to cure; from that time I drest him no more, but advised him to be temperate in eating and drinking, and if there were occasion, I would see him again. My servant drest him afterward, and before the seventh day was expired he was cured, and walkt abroad, not complaining any more of that Wound.

Thus it frequently happeneth, that a Sword passeth through the Body without wounding any considerable Part. Yet if the wound had been kept tented, it might have been subject to Inflammation, by reason of the disturbance there; from whence ill Accidents might have happened. And what could the Chirurgeon have advantaged the cure by keeping such little wounds open, supposing blood had been extravasated, which is the common pretence? Yet if it be not done, he is usually condemned by the common vogue. Therefore it is that some of our Profession, possibly against their own judgments, keep them tented often, to the ruine of their Patient.

CHAP. IX.

Of Wounds of the Head.

I Shall now discourse of wounds of the Head, not only as they are made by Cut, Stab, or Bruise, but also of those made by Gun-shot; and so by anticipating part of the Discourse next ensuing, give you the full Doctrine of them, by what Instrument soever made, without a necessity of future repetitions. And that you may understand the *basis* whereon these Cures are wrought, I shall represent the Head to you as it is framed.

Parts of
the Head
considered.

The Hairy
scalp.

Forehead.

Temporal
Muscles.

Pericranium.

The Head, according to *Galen De usu part.* is the noblest Member of our Body, the principal Faculties being there seated, for the use of which it was ordained; and is so contrived, as to be the foundation of Animal Spirits, and also to contain the principal Organs both of the internal and external Senses.

In the first place the Hairy scalp presents it self to our eyes; and therein is to be considered its Thickness, sense, and vessels, with the Muscles that lie under it. The Hairy scalp is thinnest on the top of the Head; nor is there any Muscle between it and the Scull in that part, unless you will call the *Membrana carnosæ* a Muscle; which some Men of late do, and possibly not improperly; and the rather, because by it many men move the whole Scalp. If you doubt of a Fracture there, you may boldly cut into the Hairy scalp: it is of an obtuse sense, and easily healed up again. But be cautious how you make

your Incision in the forehead, where a transverse Wound may cause the Eyebrows to fall over the Eyes. Therefore if you are forced to make Incision, let it be according to the length of the Fibres. And be carefull that you make no Incision upon the Temporal Muscles for thereby Convulsion and other ill Accidents may happen.

Under the Hairy scalp lies the *Pericranium*, which we are to cut through in making way to the *Cranium*. You are to raise them both together, when you lay bare the *Cranium* for the use of the *Terebra*. For (say Authors) if in perforating the *Cranium* you tear this Membrane, Inflammation and Fever may follow; the *Pericranium* arising from the *Dura Mater* through the Sutures, by which continuity that may also partake of the Inflammation.

The

The *Cranium* follows, which is a Bone composed of many joyned together by Sutures, of which there are five concern us; *Coronalis*, *Lambdoides*, *Sagittalis*, and two false ones. In perforating the *Cranium*, you are to shun these, (if you may,) for through them the *Dura mater* passes, as I told you, and is continued unto the *Pericranium*. The Sutures divide the Bones of the *Cranium*, by which one part may be preserved intire, while the other is broken, which otherwise would be in hazard. These Sutures are weak in resisting Blows, and between them Matter may be unhappily retained, and cause a *Caries*, and sooner work through to the *Dura mater* than in other parts of the Skull. It is necessary to know them well, lest, as *Hippocrates* gives good caution, you take them for Fissures. The way of finding them is, by passing one String from Ear to Ear, and another from the Nose to the Crown of the head. The former of these will shew you the Coronal Suture, the second the Sagittal, which usually begins at that point where these Lines intersect, being the part where we make Fontanelles, and reacheth to the Crown of the head, and joyneth with the *Lambdoides*. Sometimes it beginneth quite at the Nose. The *Lambdoides* ariseth at the end of the Sagittal, and goeth forked down the two sides of the *Occiput*. Of the *Suture nothæ*, the two chiefly to be regarded are the *squamosæ*, which run under the Temporal Muscle of each side, round about the outermost verge of the Ear. You are also to take notice, that the *Cranium* is thinnest in the middle part of the Head, and thickest in the hinder part, and of a middle thickness in the Forehead. Hence it is that Wounds are most dangerous in the Crown of the head, where the Skull, by reason of its tenuity, easily communicates its hurt to the Brain; and also for that the upper part of the Brain lies there high, one of the largest *Sinus*'s being immediately under the Skull, and many capillary Veins runing so close with it, as to make themselves Trenches in the internal part of the *Cranium*. Wherefore upon a Blow or Contusion in this place the Veins may easily be broken, and the blood extravasated between the *Cranium* and *Dura mater*, and ill Accidents follow.

Cranium
and Su-
tures.

The *Dura mater*, a strong Membrane, is placed under the *Cranium*; the wounding of which is attended frequently by Palsies, and in progress of the Distemper by Convulsion, with other ill Symptoms; and the greater, if the Wound be in the middle part of the Head according to its length, there being many Vessels there, which, if they chance to be cut, will fill the vacant space between the *Cranium*, and *Dura mater* with blood.

*Dura ma-
ter.*

The *Pia mater* lies upon the body of the Brain, so close, that a Wound cannot be made into the *Pia mater*, and the Brain escape: and from its many Veins a Flux of blood must follow.

Pia mater.

The Brain lies under the *Pia mater*, in whose Ventricle is lodged the *Plex-Brain*, *us choroides*, and under whose *basis* lie large numerous branches of Arteries and Veins, which by great Blows of the Head may be broken.

From the Description of the Head we shall proceed to the Description of its Wounds, which are strictly so called, where any part of the Skin, Flesh, Bones, Membranes or Brain is cut or torn.

Descripti-
on and
Difference
of wounds
in the
Head.
Concussi-
ons, Con-
tusions,
and Fra-
ctures.

But where the Skin remaineth whole, Concussions and Contusions do often happen, and will deserve to be treated of in this place with the Wounds: not only because they are the frequent Companions of Wounds; but also because, when alone, they produce grievous Accidents resembling those of Fractures, nay often exceeding them. I shall therefore gradually describe Concussions, Contusions and Fractures, under the following Heads.

I. There may happen Concussions of the Brain from a Blow, Fall, &c. nay sometimes from a Box on the ear, wherein the Symptoms may arise to a great height,

height, without breaking either the Skin without, or Scull within. Which Concussions if they be of the lesser sort, wherein no Vessel is broken or blood extravasated, so that the person is only stunned, he soon recovers. But if of the greater sort, with rupture of the Vessels and extravasation of blood, they produce *Stupores, Vertigines, Deliria*, and many the like Symptoms, and are every whit as dangerous, nay often more dangerous than Fractures themselves.

2. Contusions, when great, do usually produce a Fissure or Crack of the Scull, either in the same part where the Blow was inflicted, and then it is called *Fissura*; or in the contrary part, in which case it obtaineth the name of *Contrafissura*. The Fissures are through both Tables of the Scull, or one only. If one only, then either outward, or inward, the other *Lamina* remaining whole. They are long, short; wide, narrow; straight, crooked, &c.

3. Contusions are considerable whether they be with a Wound, or not. Those without a Wound are for the most part accompanied with great Concussions, and sometimes Fissure and Fracture, or depression of one or both Tables: in which case the spongy medullary interval that interceeds between the 2 Tables is frequently broken into its minute Fibres, and squeezed together. Hereupon Extravasation of blood followeth, and other Accidents that will be taken notice of in the Prognosticks and in the Observations.

4. Next to these are Contusions with Wounds, which are generally attended with Fracture properly so called, where a piece is wholly divided from the rest of the Scull. This Fracture sometimes consisteth of many pieces, some whereof are depressed upon the Membranes, yea into the Brain it self, while others lie intangled in the Flesh.

5. Next to these are Wounds made by any sharp Weapon, which, according to the force, cutteth into the Bone many ways, which Cuts are called *Sedes*, and are reckoned amongst the Fractures; and so those made by Pole-axe, Halberd, and such obtuse heavy Weapons, may justly be termed. But those made by a Sword have seemed to me Wounds, and not Fractures; and when they do not penetrate the first Table, require no other Cure than that of Wounds; as may be seen in some of the Observations. But when the Penetration is deep, I do treat it as a Fracture, and so I place it here.

6. Out of these proceed several Species of compound Fractures; as the *Ecpiesma, Camarosis, Eccope*, &c. which every man's experience will suggest to him.

Sings.

Celsus, in his 8. Book and 4. Chapter, advises, when you are called to a Patient in such cases as above mentioned, to enquire whether he was stunned or fell down with the Blow, or vomited presently after. You are also to enquire how he was hurt, whether by Blow, or Fall. For from the force of the Weapon, and manner of the Fall, you may shrewdly guess at the case. You are also to consider the Tumour, whether it be great, or small. If there be a Wound, nothing is more sure than your Finger to discover the Fracture. If you feel any Asperity, if it be not a Suture, you may be sure it is a Fissure or Fracture. But supposing there be neither Wound nor Tumour, yet if the Patient suffer under a Palsie in any part, or lie stupefied or raving, it is most certain the Membranes of the Brain are oppressed. And if the Hair lie cut in the Wound, you may suppose the *Cranium* hurt, it being no small force can divide Hair in that place. The holding a Thread between the Teeth, or biting a Crust, is mentioned by Authors as a way to find out a Fracture: but I think it of no great moment, unless the Fracture be near or under the Temporal Muscle.

Prognosticks.

Wounds of the Head, according to *Hippocrates*, are not without danger, how slight soever they may appear to common judgment. Incised Wounds of the Hairy scalp reaching to the *Cranium*, cut by a Rapier, are the least dangerous

or

or difficult of Cure. Those made by a Halberd, Bill, and such like heavy Weapons, are not without danger; so also those made by Puncture with a Dagger. By how much the nearer they penetrate to the Brain, so much the more dangerous they are. All Contusions of the Head are to be suspected, for from those the greatest Symptoms do arise. If in laying open the *Cranium* the Patient recover not his Senses, you may suspect an Extravasation of blood under the *Dura mater*; in which case his Life is in great hazard. Those Fractures made by Gun-shot do for the most part beat pieces of the Scull into the Brain, and so may be determined mortal. But be the Hurt what it will, if it penetrate not farther than the *Dura mater*, it is curable, if it be timely laid open, and dressed, as shall be shewed in their proper places.

We begin with the Cure of simple Contusions of the Hairy scalp happening by Blow or Fall, attended with Pain, Inflammation, and Tumour. In order to the preventing or removing of which, you ought in the first place to shave off the Hair, if there be any, and embrocate the tumour and Parts about *cum ol. ros. myrtill. & aceto*, and apply this or such like Cataplasm on the affected Parts: *Rx far. hord. fabar. an. ʒvj. pulv. nuc. cupress. balanst. aluminis roch. ʒj. ros. rubr. ʒvj. ol. ros. ʒiij. album. ovor. num. ij. aceti q.s. fiat Cataplasma*. After you have thus dressed the Patient, let him bleed in the Arm or Neck of the same side, and some hours after let a Clyster be administered and lay him to rest at night with a Draught of an Emulsion of the cold Seeds, &c. The next day repeat the former method of dressing; and after you have thereby restrained the afflux of Humours, you may foment the remaining Tumour with Red wine wherein have been boiled *fol. betonic. flor. anthos, stachad. cham. ros. rub. bacc. myrtill. &c.* and embrocate with *ol. ros. & cham*. But if it grow hard and painful, and threaten Apostematation, foment it with *decoct. summitat. malva, rad. althææ, sem. lini & fenugræci*, and make a Cataplasm of the *Fæces*, adding *far. hord. &c.* And if it suppurate, treat it as a *Pblegmon*. But if the Pain do mitigate, and the Tumour be continued with extravasated blood, as in an *Ecchymosis*, you ought then to discuss and dry up the Serosity by such like: *Rx far. hord. fabar. an. ʒiij. flor. ros. rub. bacc. myrtill. an ʒj. summit. absinth. fol. beton. flor. sambuci, cham. an. ʒiij. sem. cumin. ʒj. pulver. & coq. in vin. rub. addend. mell. com. ʒij. ol. ros. & cham. an. q.s. fiat Cataplasma*. If by these the Humour doth not dry up, nor the Tumour discuss, open it, and digest and cure it as in its proper Observation will be shewed. If there be a Concussion with the Tumour, you ought to begin with letting blood, and repeat it as you see occasion, even to failing of the Spirits; and keep the Body soluble by Clysters; also temperate the Ferment in the blood by frequent Draughts of Emulsions, &c. The external Applications are much the same as have been abovesaid, by shaving off the Hair, and embrocating the Head and Neck *cum ol. ros. myrtill. album. ovor. & aceto*, and applying Cataplasms as abovesaid decocted in Red wine or Oxycrate. After some days, when the Symptoms are remitted, apply *empl. Vigonis ad contusiones*, or this following which is also his; *Rx furfur. tritic. ʒiij. far. lentium ʒij. flor. ros. rub. bacc. myrtill. balanst. an. ʒj. calami. aromatic. ʒjβ. flor. cham. melilot. an. ʒβ. nuc. cupress. num. vj. pulver. omnia, & coquant. in vin. auster. q.s. ad consist. Cataplasma. addendo ol. ros. cham. an. ʒiij.* Or with Wax, &c you may make it in the form of a Cerote. Fomentations may likewise be made of the foresaid Ingredients. But in case the Concussion do not cease by the prescribed Remedies, then lay open the suspected Part, and proceed as hereafter shall be shewed.

In great Contusions without a Wound, if the Tumour be large, feel pappy, and increase notwithstanding your application of Refrigerants; you may suspect the quantity of Serum raising the Tumour to proceed from within,

A a a

through

through some Fissure in *Cranio*. In which case (having considered the Symptoms) make Incision into the Tumour proportionably. And if you feel no part of the *Cranium* bare or deprest, dress it up with Digestives, and make your Applications over it of such Medicaments as have been prescribed in the former Contusions. And if thereupon the Tumour do flat, and the Wound digest, proceed in the Cure accordingly. But if there be Depression, or other ill Symptoms of internal Parts hurt, lay the Hairy scalp more open, and make way for farther inspection.

Simple incised wounds.

In the Cure of Wounds of the Head, if they be made by a Rapiër dividing the Scalp to the *Cranium*, nay though it cut the Scull, if there be no Symptom of an internal Hurt, the Lips of the Wound ought to be brought close together, and healed by Agglutination. The Stitching of these Wounds is objected against by some, lest Matter should be thereby pent in, and foul the Bone. But if you can satisfy your self that the Wound ought speedily to be healed, the work is safe, if done judiciously. Abroad in *Spain* I have seen them as commonly stitched as other incised Wounds: and in the Wars we stitched them successfully; and here in Town I have stitched up great Wounds of the Hairy scalp. However you ought not to crowd these Wounds with Dossils, for thereby you may raise a Fever, and prolong the Cure. Therefore having clipt away the Hair, dress the Wound *cum pulv. Galen. & empl. è bolo*, or some Defensative, with Compress and Bandage bringing the Lips close together; and afterwards let the Patient bleed, if he did not bleed sufficiently at the Wound: and the day following administer a Clyster, if the Body require it. At the next dressing, embrocate the Parts about *cum ol. ros. &c.* and dress the Wound with *liniment. Arcei* upon Pledgits, and it will soon cure. But if the Lips of the Wound were not retained close together at the first dressing, it may be necessary to dress it with Digestives *ex terebinth. &c.* embrocating the Parts about, and apply Plaisters accordingly. Thus in a few days all these incised Wounds may be cured.

Observation of an incised wound transverse the temporal Muscle.

One *Smith*, sometime a Tanner in *Chester*, was afterwards a Captain of a Company of Dragoons, which he pickt up in haste, to disturb us in our Retreat from the Battel of *Worcester*: He was wounded by some of our Soldiers transverse the right temporal Muscle, and was bleeding almost to death, when I was brought to his Quarters. I stitched his Wound, taking the Artery up with the Lips, and, for want of other Remedies, dress it with a little Wheat-flower and the White of an Egg, applying over it a Compress prest out of Vinegar with convenient Bandage. The third day after I took off Dressings, and found the Lips near agglutinated. I being then better provided by an Apothecary from *Warrington*, sprinkled the Lips of the Wound with *pulv. thuris & sang. dracon.* and applied a Pledgit spread with *liniment. Arcei*, and over it *empl. diachalcit.* The second day after I cut the Stitches, and applied Epu- loticks; and afterwards by a Dressing or two more cured him. I am sure he was well of his Wounds before he had recruited his Spirits he lost with his Blood.

Wounds of the Head with loss of substance.

In Wounds of the Head which you cannot cure by the first Intention, as where they are inflicted by a Weapon with an obtuse edge, or where there is loss of Substance, as part of the Lips torn off, there you must digest; and to that purpose the common Digestive *ex terebinth. cum vitell. ovi, & farin. hord.* is proper. It may afterwards serve for a Deterfive, if you add *mel. comm. aut rosat. pulv. iroes. sarcocol. &c.* With a farther addition of Myrrh and Aloes, it is a good Sarcotick. Or you may incarn with *liniment. Arcei*, which was by him designed for Wounds of the Head. *Vigo* commends this; *R. ol. rosac. ʒvj. ol. mastich. ʒij. pingued. vitulin. porcin. an. ʒiv. fab. plantag. matris sylvæ. beton. pimpinellæ, pilosellæ, flor. anthos, an. Mʒ. vini odoriferi cochl. iiij. coquantur ad consumpt. vini; colat. adde mastich. gumm. elemi, resinæ, pin. an. ʒj. lithargyr. auri & ar-*
genti

Unguent-
Matris-
sylvæ.

genti an. ʒij. minii ʒx. terebinth. Venet. ʒiv. cera q. s. If in the incarning the wound the Flesh grow luxurious, touch it with a Vitriol-stone, and it will deterge, and dispose it to cicatrize; which you may then complete with Pledgits of Lint prest out of *spir. vini, aq. calcis*, &c.

In wounds made by Contusion where the *Cranium* is a little naked, you ought not presently to croud in Dossils: for if that contused Flesh be well digested, the Bone will incarn underneath with the wound without much Difficulty. In those of the worst Habit of body I have happily incarned, by keeping the Orifice a little open by a small Dossil pressed out of *spir. vini*, and defending the Parts about from Fluxion by Medicaments and Bandage, as hath been shewed in such cases. Take care that the Matter be not shut in by your Dressings; for thereby the wound may be made more hollow, and the Cure prolonged. To prevent which, I have been sometimes necessitated to apply a Compress round, leaving a hole in the middle of it, for the discharge of Matter, whilst the Parts about incarned by Compression.

But if the wound be with so great Contusion, that it casts off a Slough, and leaves the *Cranium* much naked; though it be not fouled either by the Matter or Air, yet it will then be necessary to rasp it: for the Bone is naturally smooth and slippery, as if it were polished, and Flesh difficultly groweth upon it. Wherefore to hasten the Cure, you ought by the authority of *Galen* and the most practical men, to rasp the Bone thin, till you see the blood ready to come out of it: the Bone will thereby be the sooner supplied with materials for generation of Flesh. But if your Patient will not admit of Raspatories, then you ought to keep your Dossils close to the Lips of the wound, and make your Exfoliation from the edges, that the sound part may thrust off the rotten Bone. For neither Crabs-eyes, nor any Medicine inwardly prescribed, or Wine outwardly applied with Lint, or other Medicaments to the middle of a Bone, will signifie any thing to the Exfoliation of it: nay, the while you are so trifling, the Matter from the edges will rot the Bone underneath, and in continuance pierce through the first Table, and run down between the two Tables, thereby doing much mischief, and so will put you upon the use of the *Terebra*. After the Bone is scraped, you may dress them with Pledgits dipt in *liniment. Arcei* hot. If it require Digestion otherwise, apply them prest out of *spir. vini*, either simply, or such wherein hath been infused *pulv. radic. ireos, aristoloch. pencedan*, &c.

If in a wound of the Head made by a Sword the Scull be cut slanting off, or into the second Table, if there be no Symptoms of Concussion, you ought not to lay open the wound to set on a *Terebra*, but cleanse and dress it up with a proportionable Dossil prest out of *spir. vini*, and digest the Lips of the wound as abovesaid, and attend the Exfoliation; then heal it. Some Authors have advised the Rasping of these Bones; but in this case it is needless: for if the Bone be dressed as I have said, the Flesh will soon arise in that Cut of the Bone, and make Exfoliation of what is necessary, and incarn it, without your farther trouble.

If the *Cranium* be hurt by a sharp cutting Weapon, it cannot be without Solution of continuity in the Hairy scalp: but by a Fall or Blow the Scull may be fissured or fractured, and the Hairy scalp whole, and this Fracture or Fissure may be under the Contusion, or in some other Parts. If the Symptoms do demonstrate that there is a Fracture or Fissure, you are then without delay to open the Hairy scalp according as the Part will admit, angularly, or in the manner of a Cross, or of the Letter T, that the Fracture may be discovered by the raising of it up with its *Pericranium*. For if you shall in doubtful Fissures or Fractures make a round incision, and take out the whole piece; then, if

Fissure in
Cranio:

Against
round in-
cision up-
on sur-
mise.

there chance to be no Fissure, you have made your self a long work to little purpose : and if the Fissure run under the Hairy scalp farther than you made your Incision, you may then be necessitated to cut it open that length : by which it will appear you have through mistake laid it open more than was necessary in one place, and too little in another, doing that which neither *Hippocrates* nor any judicious Chirurgeon would ever allow. Whereas if you had laid it open by a cross Incision, you might by only raising the Scalp have discovered the Fissure or Fracture : and if yet part of the Fissure or Fracture had lain undiscovered, you might have stretcht your Incision to it : and in case after all there had been no Fracture nor Fissure, which often happens, especially in Contrafissures, then you might have laid the Hairy Scalp down again, and easily cured it ; which by an Excision of part of the Scalp you cannot do.

Object.

As to what may be objected, that the raised-up Lip might be troublesome to the Chirurgeon in his work, and painful to the Patient ; there is no such thing : for if the Incision be made the way proposed by the Ancients, and that the Fracture or Fissure be all in your view, you may order the Lips of the wound as you please.

The *Cranium* laid bare, you are to fill up the place opened with Dossils of dry Lint, or pressed out with Red Wine or Oxycrate, or a Sponge prest out of either of the same Liquors ; and apply a Plaister over all of *diachalcit.* malaxed with *ol. ros. cum aceto*, and bind it up.

Trial of
Fissures.

At the next dressing you must consider the Fissure. If it be so small, that you doubt whether it be one or not, then wet it with Ink, and wipe it off again, and the Ink will discover where the Fissure is. But if it do not, then this Emplaster may be applied : *Rx ceræ novæ flavæ, thuris, ladani, an. ʒij. farin. fabar. terebinth. aceti, an. ʒj. Misce ad ignem.* You ought to apply it on the suspected Part, and the next day, where you shall find it moist, there you are to rugine it.

Fracture
in Cranio
with de-
pression.

Fallopins tells us, that where the *Cranium* is contused, certain Spots will appear red, not unlike those white ones which are usual in the Nails of the fingers ; but after the third day the blood exhales, and that redness ceaseth. If by the Emplaster you discover the Fissure, or that the Bone contuses, you are to rasp the contused Part the whole length : to which purpose you ought to be furnished with various sorts of Raspatories. Whilst you are working with them, as the Lips of the wound ought to be covered with some soft Linen, that you neither hurt them, nor yet the Air offend them. Sometimes very small Fissures, how inconsiderable soever they may seem, are the cause of the Patient's death, there being often found extravasated blood upon the *Dura mater*, and the Veins broken, either by the Concussion from the Blow, or by the rough edges of the inner Table. Therefore you are to consider the Symptoms, and accordingly lay open the wound either by Raspatories, or otherwise cutting into it, so as the *Sanies* may be discharged, and the asperity taken away. But if there be a Fracture of the *Cranium*, you ought to satisfy your self whether it be in one or both Tables : if in both, then, whether the Depression of the Bone be great, and what Fissure there is : and accordingly make way to relieve the *Dura mater* underneath ; for it cannot be without great disturbance, *viz.* Inflammation, Fever, and *Delirium* ; from whence *Coma*, Convulsions, Palsies, and Death ensue, if neglected: But if there be a Fissure so large as to discharge the Serosity, you may take more deliberation in laying it open, or rasping the Bone. If it be otherwise, then the Trepan ought to be applied, to give vent to the *Serum*, and to make way for the raising the deprest Bone. But if the Bone be not much deprest, and the Fissure con-

siderably

siderably large, it is then at your choice whether you will enlarge that Fissure, or continue it for Evacuation of the Matter, and forbear the use of the Trepan, not doubting but a small Depression of the Bone will either rise, or cast off, by the benefit of Nature. I know it will be hard to dissuade some Chirurgeons from applying a Trepan in this case; I my self have been glad to comply with some of them, in setting on a Trepan where the Fissure was sufficiently large, and when all the ill Symptoms were remitted, and where there was no Depressure of the *Cranium*. But what did it signifie? Indeed, where the Fissure lieth untowardly for discharge of Matter, or where the Depression of the *Cranium* is deep, there a Trepan ought to be timely applied.

In Order to the Perforation of the *Cranium*, the Bone must be cleared of its *Pericranium*, lest in setting on the *Terebra*, or *Modiolus*, (which are two several names for a Trepan,) you tear the Membrane. The Lips of the Wound ought also to be covered the while. The *Terebra* ought to be set on that side which is most depending. And in case of a Depression, make your Perforation so near, that you may afterwards be able to raise up that by it. When you have set on your Trepan, press upon it with your left hand, and turn it round with your right. You must use a little *ol. ros.* or Milk to cause it to move the easier, and as it fouls, brush it; in doing of which it will cool. Before you approach to the second Table, (which you may know by the blood that appears,) it will be required that you take out the Pin, and proceed more warily, not listening to the prating of the Standers by, but often lifting up your hand, lest by your compression or haste you unawares fall upon the *Dura mater*, and wound it. Some Chirurgeons do bring out the Bone in the bore; but it will be safer to raise it up with your Levator, when it is so cut, that it is but lightly retained in some part. During this work, it is fit the Patient's Ear were stopped with Lint, lest the noise disturb him. The Room ought also to be close. The Perforation made in *Cranio*, and the Bone taken out, you are to smooth away the Asperity which remains in the lower Table by the Lenticular Instrument made for that purpose.

If after this the Membrane be fouled by the Saw-dust of the Bone, you must wipe it off with a soft Sponge, or a little Lint upon your Probe. The Part being cleansed, you are to dress up the Membrane. About this first Application Authors differ much. *Avicen* dress them with Liniments, viz. *ol. ros. Celsus* dress the Part with *siccantia*, viz. *cum aceto acerrimo*. You may find him positively for it in these words; *His factis*, (the Perforation being made) *ea membrana acri aceto respergenda est, ut si intus concretus cruor remanet, discutiat*, &c. He sprinkled the Membrane with sharp Vinegar, to prevent the Bleeding, and dissolve the concremented Blood lying upon the said Membrane or *Dura mater*. But the most part of the Ancients, and many of the Moderns, have advised Lenients, as *ol. ros.* that the blood extravasated, and lying upon the *Dura mater*, in pus convertatur, may be digested. But in this you are to be guided by your Eye. If there be Sanies or Putrefaction, *mel. ros. spir. vini*, and higher Detergents may be used, accordingly as the Putrefaction is more or less. If there be much blood extravasated, or that you fear bleeding, that of *Celsus* may be proper: but if the blood be recent, and exceed not in quantity, it possibly happened from some Scratch of your Trepan, or some little Asperity of the inner Table. If there be neither of these, but the Membrane fresh, and of its natural colour, then you are not to grieve that Membrane now exposed to the Air with Detergents, nor by the Acrimony of Vinegar: for if you shall by scratching of the Membrane make it bloody, and then dress it with either *acetum* or *mel. ros. spir. vini*, &c. you shall then proceed contrary to

Perforat-
on.First dress-
ing after
Perforati-
on.

to the common Indications in Chirurgery, which teacheth to digest recent Wounds before you deterge: and indeed what would you deterge?

Therefore I do advise the use of Lenients, not only by the authority of those ancient and modern Chirurgeons, but by my own practice. *Galen* proposed *sang. columb.* and the blood of Turtles dropt warm from their wings. *Falop.* and *Fabric. ab aquapend.* proposed *ol. ros.* with *resin. abietis*: and afterwards they increased the Resin, and lessened the Oil. But if there be Putrefaction through the long lying of concremented blood, &c. then *mel. ros.* and *spir. vini* are proper, yea *mel. Ægyptiac.* and higher if occasion shall offer. But in the common cases, after recent Terebrations, Resin by its emplastick quality mixed with *ol. ros.* perfects the concoction sooner, and by its anodyne quality secures the Part from Inflammation. It ought to be proportioned to the Habit of the body: dry Bodies require more of the Resin, and less Oil. And by this simple Medicament I never failed of good Digestion; and afterwards by the tempering of it as I have said I have deterged and digested, always continuing the use of it until the Membrane was well digested, never finding the least prejudice the bare Bone received from it. But you must take care that you do not use Digestives unseasonably, for thereby you may relax Parts. Therefore after Digestion add more Resin, and less Oil. Or you may mix *mel. ros.* with the Resin instead of the Oil, which will answer your intention, both to deterge and incarn. Or you may use this to both purposes; its Composition will commend it self: *R terebinth. Venet. ʒj. ol. ros. ʒiv. mel. ros. ʒiij. croci ʒj. granor. kermes ʒβ. sem. hyperici ʒij. vini Hispanic. ʒiij. coq. ad consumpt. vini; colat. adde aloes ʒj. Misc.* These Medicaments may be applied upon the *Dura mater*, and a Button of Lint over, to fill up the hollow in the Bone: the rest of the Bone may be dressed with dry Lint or *liniment. Arcei*, and the Lips of the Wound with a Digestive as aforesaid *cum terebinth.* over which apply *empl. diapalma* malaxed with *ol. ros.*

Caution.

Observation.

Gun-shot.

In the use of Medicaments you are to consider the Part and Habit of body, and add or diminish your Simples accordingly as you design to deterge or incarn, &c. and so they will perform all intentions. Some Authors have limited us a time to dress with this or that Medicament; viz. to use Digestives to the fourth day, from that time to deterge to the seventh, and to incarn to the fourteenth day. But herein you must make use of your own judgment, persisting to cherish the native heat. If the Wound penetrates to the *Dura mater*, you must consider the force of the Weapon, and make haste to relieve the Parts under the *Cranium*. Yet a day or two before the Battle of *Worcester*, a Gentleman attending the Earl of *Derby* in his Retreat thither received a large Wound between the Sagittal and Coronal Sutures by a Sword, it cutting through the *Cranium* to the *Dura mater*. The Membrane was covered with the small Shivers of Bones. He had only a thin linen Cap over it, his haste not permitting him to be dressed. And it may be it was the better for him: for if Dossils had been hastily crowded upon the Bones, severe Symptoms would have followed; whereas the Shivers lying lightly upon the Membrane, he was free, and being ignorant of his danger, rid a great Journey. I after took them out, and dressed the Membrane with Digestives the short time we were together. But when Fractures are made with Bullets or Slugs, there the Hairy scalp and pieces of the *Cranium* are driven in together upon the *Dura mater*. In which cases you must presently lay open the Hairy scalp, and raise it up with the Bones, and relieve the oppressed Membrane. If the Flux of blood be great, cleanse it with a Sponge dipt in Red Wine or Vinegar, and dress it as hath been shewed. If the Opening in the fractured *Cranium* be not sufficient, make one

one in the most declining part, and raise up the Bones, and free the Membrane of whatever may offend it. But do not take out more Bones than needs must: like some of those Chirurgeons I have met carrying them about in their Pockets, boasting in that which was their shame. For if you look well upon such, you may see many of them were corrupted by the Matter, through the ignorance of the Chirurgeon. For recent Fractures of the *Cranium* do frequently unite like those in other Parts, if the Matter hath liberty to discharge from within. Therefore having raised up the Bones that are loose, dress the others dry with Catagmatics, &c. and take care that they be not overgrown with loose Flesh, and they will happily agglutinate.

It sometimes happeneth in great Concussions, that we lay open the Hairy scalp; and though we discover neither Fissure nor Fracture, yet we perforate the *Cranium*, to relieve the Patient: but if notwithstanding the Symptoms of *Coma* or *Paralysis* do not remit, you may shrewdly suspect the Extravasation of blood lieth deeper. For it sometimes happeneth in Concussions, that the extravasated blood lieth between the *Dura* and *Pia mater*, and otherwhile amongst the Ventricles of the Brain. In which cases, if the Perforation of the *Cranium* relieve them not, you must make Apertion through the *Dura mater*; and if the blood lie between it and the *Pia mater*, it may haply be discharged. How that is to be dress'd, I shall shew you presently: but for the most part the long retention of Matter sphacelates the Brain; and as the Patient suffered from the beginning under the severe Symptoms of *Coma* or *Paralysis*, so he dies at last Convulsive.

In these Wounds of the *Dura mater* the Lenients of *ol. ros.* or warm Pigeons blood are proper: they are anodyne, and digest. *Ol. hyperic.* and Mastich are also good mixt with Resin. *Fabr. ab Aquapendent.* cites *Galen*, and he *Archigenes*, as dressing these Wounds with *succ. calaminth.* and afterwards sprinkling *pulv. milii* on the Membrane to incarn it; the *miliun* moderating the heat of the other. He delivers them to us as *siccantia*, *detergentia*, and *incarnantia*. The Unition and Incarning of the Lips of the *Dura mater* is performed by a Flethy substance that ariseth upon the Membrane, which afterwards, as it increaseth, doth unite them, and overspreading that part groweth up to the *Cranium*, and unites with that *Callus*, (after Exfoliation of the Bone,) and becomes one body with it, filling up the place that was perforated, and in time groweth more firm than the Bone it self. But the while you must be careful that your Lenients make not the Fleth too lax by their greaziness; for so a *Fungus* will thrust out thence, which may be vexatious to you. This in the beginning may be prevented by Desiccants, and wasted by *Mercur. precip. pulv. cort. granat. balanst. ros. rub.* or *alumen ust.* alone. But if it grow very big, it must be taken off with a Ligature. Yet to tell you truly, I never met with any such like disturbance as is represented to us by Authors, nor shall you, if you use your Desiccants timely. For the Vitriol-stone takes this off with little pain, and disposes the Part to cicatrize, if it be used with moderation and timely.

The *Pia mater* is (as I have elsewhere said) a most delicate fine Membrane, and adheres so close to the Brain, that it can scarce be hurt without a Wound in the Brain it self: which Wound is for the most part mortal, partly for that the Membrane is full of Veins, and subject to great effusion of blood; partly also because the Brain being exposed to the Air is thereby over-cooled, and corrupting groweth fluid, and is thrust forth by the contraction of the *Meninges*, (or Membranes,) which are irritated by the constant pain they suffer from the putrefaction of the Brain; and so it happeneth that it worketh out at the Wound. So long as any remaineth in that Ventricle, you must make way to these Wounds by removing the shattered Flesh and Bones: but

if

Note.

if they will not come easily away, leave it to Nature, lest the Patient die under your hands, and you be thought to hasten his death. Your Dressings must be with *Galen's Powder* and Hares-fur *cum albumine ovi* upon Pledgits, to restrain the bleeding, and retain the Brain within its bounds. Apply over them your Dressings, as in the Wounds of the *Dura mater*: remembring in all these Gun-shot Wounds to cut off the shattered Lips of the Hairy scalp, lest a Gleet drop from them upon the *Meninges* and brain, and heighten the Accidents. If the brain be retained within its Membranes, the *Pia* and *Dura mater*, and they digest and incarn, then you may proceed in the rest of the Cure as in Fractures of the *Cranium*, as hath already been said.

In all hurts of the Head, what sort soever they be of, the body is to be emptied: and the rather, if there be *Plethora* or *Cacochymia*: for in such Habits of body Humours are more apt to stir up ill Symptoms. Therefore you ought timely to let them blood in the Neck or Arm on the same side; and repeat Bleeding according to the exigency, and the strength of the Patient's body. Also Cupping (with or without Scarification) of the Neck and Shoulders, with Fontanels under the Ears, is necessary. Then lenient Purgatives, such as may evacuate the ferous blood, which by reason of its tenuity and heat readily flies to the affected Part. These Purgatives must be such as have been proposed in the Fourth Intention of Wounds in general, to which I refer you. Cordial Spices and Electuaries may be proper, if they be proportioned to the Temperature of the body, hotter or colder, as there are Fever or other Accidents joyned with the Malady; in which cases Juleps and Emulsions are necessary. Vulnerary drinks are sometimes in use here, if they be fitted according to the nature of the Part. The Ingredients for these are *beton. artemis. caryophyll. primula veris, lilium convallium, salvia, hyperic. saniculla, veronica, plantag. flor. ros. rub. nuc. moschat. &c.* as in the Chapter forementioned. Of these you may make Drinks with Wine and Water, or small Ale: *R. sanic. beton. veronic. artemis. an. ʒj. conf. ros. rub. caryophyll. ʒβ. tormentill. ʒij. coquantur in aq. font. & vini Rhenani an. ℥ij vase clauso in B. M. colentur per manicam Hippocratis.* Give *iv.* of this morning and evening. Or take a few of each of these Plants well dried and cut, boil them, and then sweeten the Decoction with Honey or Sugar to the Palate of the Patient, and give him a Dish of it to drink twice or thrice a day. You may aromatize it with *Sanders, cassia lign. or saffrafas, &c.*

Externals.

The external Applications have been already set down all along as I treated of the several Accidents befalling the Head, whether made by Contusion, or Wound affecting the Hairy scalp, *Cranium*, or *Meninges* of the Brain. Yet for the more confirmation of the young Artist, I shall make a short repetition of what I have delivered concerning the Application of them, that he may not stagger in following the Doctrine here set down. I shall also supply you with more variety of Medicaments, that you may not be to seek for choice elsewhere.

In every Contusion of the Head, whether a Wound be joyned therewith or no, it will be necessary that in the first place you defend it from the Influx of Humours; and your Medicaments thereto ought to be refrigerant and exsiccant, to contemperate the heat, and dry up the Humours already extravasated. To which purpose *Hippocrat.* prescribeth this: *R. far. hord. ʒviii. ol. ros. ʒiv. coct. in aceto ad consist. Cataplasmatiz:* In Winter he added *flor. ros. rub. pulv. ʒij.* decocted in Wine. Others have since added *bacc. myrtill. & balauſt:* the more to corroborate the relaxed Part. Before the application of these the Hair must be shaved, and the Head and sides of the Neck embrocated *cum album ovi. ol. ros. & aceto.* If there be a Wound with it, you ought to digest it with

with that *ex terebinth.* or this; *R terebinth. Venet. ʒiiij. ol. hyperici ʒvj. thuris ʒij. vitell. unius ovi, Misc.* or that of *far. hord. eribrat. ol. ros. & vitell. ovi.* These ought to be spread upon Pledgets, and dipt in *ol. lumbric.* hot. The Fluxion restrained, apply Discutients in the form of Cataplasms, Cerots, or Emplasters; as *empl. Vigonis, de beton. de gumm. elemi, de matris sylvæ, cerat. isidis:* or *R succi beton. ʒij. ol. ros. ʒiv. mastich. myrtillor. an. ʒj. pingued. hirci ʒjʒ. coq. ad succ. consumption. colat. adde gumm. elemi, tacamahac. an. ʒx. terebinth. ʒijʒ. ceræ alb. q. s. iterum bull. ad consist. Cerat. or, R gumm. elemi ʒiiij. opopanax. ʒij. bdellii ʒjʒ. resn. pin. ʒj. ceræ q. s. fiat Ceratum.* In all Wounds of the Head *gumm. elemi* is much commended; it mitigates Pain, and corrects the evil Temper of the Part by a particular virtue it hath thereunto. *Fabr. ab Aquapend.* commends this Emplaster: *R beton. virid. Mviiij. contund. contus. add. ol. thiv. ceræ, terebinth. an. thij. coquantur, & exprimatur; colat. adde succ. beton. thj. iterum coquantur ad succ. consumption. pro usu.* And after Digestion of the Wound you may deterge with such like; *R terebinth. ʒiiij. mel. ros. ʒij. succ. plantag. apii, an. ʒjʒ. coq. ad succor. consumpt. de in adde far. hord. ʒj. sarcocollæ ʒjʒ.* And afterwards incarn, by adding *myrrhæ, mastich. aloes, an ʒʒ.*

If the Contusion were without Concussion or Wound, and through want of timely repelling it, it apostemate, treat it with Lenients, *viz. ex rad. althææ, flor. melilot. far. hord. vitell. ovor. & ol. ros.* And if it suppurate, open it, and dress it as aforesaid, with Digestives, &c.

If the Scull be fractured, lay it bare by cutting, and raising up the Hairy scalp, fill the Wounds with Dossils, and apply over it the Cataplasm of *Hippocr.* or such like, embrocating *cum. ol. ros. &c.* as hath been said. At the second dressing; digest it with *ol. ros. cum resina,* as before is directed. But if it be sanious, deterge with *mel. ros. spir. vini, &c.* as you see cause, and dress the Lips of the wounded Scalp with this or the like: *R terebinth. lot. in aq. salviæ ʒj. ol. ros. ʒjʒ. gumm. elemi cum oleo super ignem solut. & colat. ʒʒ. croc. pulv. ʒj. vitell. ovi ʒj. Misc.* By the speedy Digestion of this Wound you will facilitate your Cure.

After Digestion *spir. vini* will be found of good use, it having such a sic-
cant quality as is requisite for these Wounds, not only for the *Calvaria*, but of
the *Meninges*, either alone upon Lint or mixed with *mel. ros. or syr. de ros.*
sec. Or use this following: *R spir. vini ʒvi. myrrhæ ʒʒ. aloes ʒj. sarcocoll. thur-*
ris, an. ʒij or this Balsam; *R spir. vini thjʒ. vin. malvatici ʒxvj. myrrhæ, thur-*
ris, an. ʒx. pulv. rad. consolid. ʒj. pul. centaur. min. ʒjʒ. flor. hyperici pulv. ʒʒ.
terebinth. thʒ. infund. in balneo S. A. apply it warm upon the *Meninges*: If
the *Dura mater* have changed its colour. and do not deterge with what is
proposed, then *R terebinth. lot. in vin. alb. ʒiiij. mell. ros. spir. vini, an. ʒj. myr-*
rhæ, aloes, sacchar. alb. ʒij. Misc. If these Wounds tend to Putrefaction, sca-
rifie the Lips of them, and apply this or such like; *R Mithridat. ʒvj theriac.*
Venet. ʒij. mell. Ægyptiac. ʒj. pulv. scord. myrrhæ, an. ʒj. spir. vini q. s. The
putrefaction got off, you may then dress with this *Johan. Andrææ à cruce:*
R ol. terebinth. Venet. mell. ros. p. æq. apply it warm. All these Medicaments
are to be applied upon a Sindon to the Membranes. A Sindon is a piece of
Silk or fine Linen cut round proportionably to the Perforation made in the
Cranium, and is to be placed under the edges of the *Cranium* by the Lenticular
Instrument, that those edges of the fractured or perforated *Cranium* hurt not
the *Dura mater*. A Thread or Silk must be fastned to it, to pull it out at
pleasure. Apply over it soft Dossils or Lint, to fill up the void space in the
Bone, thereby to keep the *Dura mater* from rising above it.

In Wounds of the Membrane of the Brain and the Brain it self, *R succ. be-*
ton. ʒiv. succ. calaminth. ʒij. flor. centaur. min. Piʒ. hyperici contus. ʒij. vini odo-
riferi

* Quare,
whether the
dose of
Chal-
canth. be
not missta-
ken, at least
if by it be
mean ol.
vitriol.

riferi ℥ij. Infuse these three days, then boil them to the consumption of the Juices; strain it, and add to it *terebinth. claræ* ℥iij. *gumm. elemi dissolut. in spir. vini* ℥ij. *ol. hyperici* ℥ij. *mell. ros.* ℥vi. boil these a little, then add *pulv. myrrhæ, aloes, sang. dracon. thuris, an* ℥j. *Ol. Aparici* prescribed in Wounds in general is an excellent good Medicament in recent Wounds of the *Meninges* of the Brain. *Fabr. ab Aquapend.* proposeth this in Wounds of the Brain: *R. far. millii* ℥β. *ol. Aparici* ℥j. *Mithridat.* ℥vj. *bals. Peruvian. ex Ægypto* ℥iij. *spir. vini* ℥v. and if it require to be more desiccant, he adds * *olei de chalcantro* ℥β. Drop this (saith he) warm and your Digestives over the Wound, then embrocate the Head and Parts about with *ol. ros.* and lay this Emplaster over all; *R. far. bordei* ℥viii. *pulv. cham.* ℥iv. *pulv. spicæ, schœnanth. an.* ℥iij. *pulv. beton. stœchad. an.* ℥ij. *ol. mastich.* ℥β. *ol. ros.* ℥iv. *oxymel. simpl.* ℥v. *vini alb. potent. q. s. fiat Emplastrum.* If the Bone be carious, and do not readily exfoliate, you ought to ruginé it, and dress it with *liniment. Arcei.* If that be too relaxing, *R. spir. vini* ℥x. *myrrhæ* ℥j. *aloes* ℥ij. *rad. pencedan. aristoloch. cort. thuris, an* ℥β. *pulver. & misceantur pro usu;* apply it upon Dossils. In dry Bodies this; *R. pulv. aloes, pumic. ust. pomphol. an.* ℥ij. *myrrhæ* ℥j. *pulv. ostr. combust.* ℥ij. mix them with *mel ros.* & *spir. vini* and apply this Emplaster over all; *R. cera, resinæ pin. gum. ammoniaci, elemi, an.* ℥vj. *terebinth. ℥iij. pulv. myrrhæ, mastich. aristoloch. rotund. ireos, aloes, apopanax. euphorb. an.* ℥j. *ol. ros. q. s. fiat Emplastrum.* After the Wound is incarned, you may cicatrize it with one of these or such like: *R. plumbi usti cum sulphure & loti, litharg. aur. an.* ℥ij. *antimon. ust. & loti, cerussæ, an.* ℥j. *ol. ros. q. s. fiat Unguentum;* or *R. calcis putaminum ovor. calcinat. ℥β, alum. ust. ℥j. croci Martis ℥j. fiat Pulvis.* Thus I have set you down variety of Medicaments, whereof you may fit your selves according to the exigency of the case. I shall now shew you some of my work, wherein I used but a few.

1. Obser.
vat. of
Contusi-
on, with-
out wound
or concus-
sion.

I Was sent for to a young Fellow who had been shrewdly cudgell'd about the Pate. He was sick in bed, and dozed with the pain. I looked upon his Head, and saw it swell'd in several places: some of the Swellings were big and pappy, abounding with extravasated Serum. I presently looked for the Jugular Veins, and seeing them full, I opened the fairest, and took away at least a dozen ounces of blood: then caused the Hair of his Head to be shaved off, and embrocated all his head, Neck and Jaws with a mixture of *ol. ros. myrtill. acet. cum. album. ovor.* and applied a Cataplasim over all his Head of *far. bord. fabar. flor. ros. rub. balauft. bacc. myrtill.* decocted in Oxymel. A Clyster was that evening administred, and an Anodyne draught disposed him to rest that night. The next morning I was informed he had slept at times, but I found him hot, and his Pulse quick. I opened the other Jugular Vein, and seeing him bleed with a full stream, I permitted it to flow proportionably: then having a Fomentation ready of Claret Wine wherein had been infused *flor. ros. rubr. balauft. nuc. cupress. &c.* I took off Dressings, and stuped them, and thought to have opened one of these Tumours; but seeing it diminish- ing, I forbore, and embrocated his Head again *cum ol. ros. myrtill. & aceto,* and applied the Cataplasim as before. By these Applications I dried up the Humour in a great measure before the seventh day; then added some Cephalicks to the former Ingredients, and boiled them in Wine and Water, with which I caused his Head to be fomented, and afterwards applied *Vigo's Cerat. ad contus.* During the first seven days I permitted him only Water-greuel or Panado, and kept his Body soluble by Clysters: but afterwards gave him more liberty and purged him: by which method he recovered, without any manner of laying open. And thus all external Contusions may be happily cured.

A Person of Quality, aged between 30 and 40 years, by accident of a Fall out of her Coach, bruised her Head a little above the right Temporal Muscle. She was stunned with the Fall, but did not vomit. She was dressed by some of her Servants with such Medicaments as those of her own Sex advised. About 14 days after, being indisposed, she came to Town, and sent for me. I saw a large *Ecchymosis* remaining, and a Tumour of the bigness of a Pheasant's Egg: it was soft, and seemed to be full of corrupt *Serum*. There appeared no hopes of discussing it, and yet it was not safe to permit it to lie longer so near the Bone. Wherefore I applied a mild Caustick upon it, and dividing the Escar, gave vent to the *Serum* and some Clots of grumous blood; then fomented it with Wine, and dressed it up with a Dossil spread with a Digestive *ex terebinth.* and *unguent. basilic.* over it upon the Escar, and embrocating the parts about with *ol. cham.* applied *empl. diapalm.* with Compress and Bandage. At the next opening I saw the Ulcer well digested, and no part of the Bone bare; nor was it painful in the time of dressing or afterward: yet from the first day I dressed her, she usually fainted the while, and put us upon a necessity of laying her down in her Bed some time before we had finish'd our Applications; where after she had lain an hour or 2 very sick, she recovered again, and walked about her Chamber very well. Her Friends and Relations, who visited her often, and saw her thus distempered, suspected it to arise from the Wound; but I supposed it Vapours, and prevailed with her to consult a Physician. The Physician being come, I took off Dressings, and shewed him the Ulcer well digested, and disposed to heal, without the least sign of ill: the Physician also concluded so. But before I had dressed her up, she fainted, and was carried to Bed sick. These Faintings increasing, her Physician began to suspect it proceeded from the Contusion; but her recovering again so well afterward, confirmed him that they were Vapours, and that by Purging she would be relieved. She complied, and was moderately purged once in 3 or 4 days, whereby she was somewhat freed of these Fits, and I had liberty to cicatrize the Ulcer. After which I made her a Fontanel in her Leg, and she retired to her House in the Country, where she took Physick, and recovered perfectly well. If these fainting Fits had proceeded from the preceding Contusion, they would not so have intermitted and gone off as they did.

2. Observation of Contusion, with an *Ecchymosis* opened.

A person of about 36 years of age was wounded upon the Road by a Blow with a Spintree-bar upon the *Os frontis*, near the Coronal Suture, about the length of 2 Inches. I cleansed the Wound with a Sponge, and clip'd the Hair away: then putting my Finger into the Wound, I felt the *Pericranium* found and smooth; and seeing no Symptoms in the Patient of Fracture or Concussion, I brought the Lips of the Wound close together, dressed them with a Digestive *ex terebinth.* upon Pledgits with an *empl. è bolo*, and Compress over it, putting him on a linen Cap, and his Peruke over that. I forbore to let him bleed that night, in consideration that he had bled much upon the Road. The next morning, finding him in good temper, I did neither let him bleed nor dress him; but the day after I took off Dressings in the Presence of Dr. Cox and Dr. Walter Needham. The Wound seeming near closed, I applied a Stupe or two wrung out of Red Wine, and dressed him with *liniment. Arcei.* The second day after I viewed it again, and seeing the bruised Flesh between the Lips of the Wound cicatrizing, I dressed them with *unguent. tutia*, and continued to do so every other day. During his Cure, he kept his Chamber, and was healed in very few days, whereas if his Wound had been filled with Dossils, a Fever would have followed, and other Accidents which would have confined him longer to his Chamber.

3. Observation of a contused Wound.

4. Obser-
vat. of a
wound
betwixt
the Sagit-
tal and Co-
ronal Su-
tures.

A Coachman being wounded with a Rapier to the Bone between the Sagittal and Coronal Sutures about an Inch in length, the next Barber dressed him, and called in a young Chirurgeon to help him. They (as they said) felt a Shiver of the Bone cut off, and sticking in the *Pericranium*; whereupon they divided the *Pericranium*; and laid the Bone bare, filling the Wound up with Dossils. The Fellow being of a full Body, and the Blood fermenting, a Fever followed, and the seventh day the Lips of the Wound and the Parts about were inflamed and swelled. They then dressed the Bone with Dossils dipt in *spir. vini & mel. ros.* and deterged before they had digested; by which the Bone was stained, and a necessity followed of exfoliating it: whereas such an incised Wound might have been incarned by *liniment. Arcei*. But this Practice will not want those that will defend it: and who can help it?

5. Obser-
vat. of a
large
Wound
of the Cal-
varia.

A poor Woman near *Ludgate* coming out of her Chamber one night, and pulling the Door to her by the Key, it slip'd out, and she tumbling down stairs, cut and raised up the Hairy scalp from the beginning of the *Lambdoides* downwards. I caused the Hair to be clipt and shav'd away from about the Wound, and cleansed it from the Blood, then brought the Lips close together by 3 or 4 Stitches, embrocated the parts about *cum alb. ovi, aceto, & ol. ros.* and dressed her up with Agglutinatives, applying over all *empl. è bolo* and Bandage; then gave her an Anodyne Draught, and left her to rest. The next morning I took off my Bandage and *emplast.* and embrocated the Parts about with *ol. ros. cum aceto*, applying a Cataplasim *ex farin. hord. & fabar.* decocted in *Oxycrate*, and adding *ol. ros.* I took away a little Blood by opening a Vein in her Arm, and prescribed her a Clyster of Milk and Sugar that afternoon. I continued the Cataplasim morning and night, but dress'd not the Sutures till the third day; and by that time the Tumour being diminished, and the Wound inclined to Agglutination, I dress'd up the Wound again as before. At the next opening I cut out the Stitches, and dress'd the Wound with Sarcoticks and *empl. beton.* over all, instead of the Cataplasim; and in a few days cured her of that Wound by Agglutination.

6. Obser-
vat. of the
Calvaria
torn off

A young Fellow, Servant to a Horse-courser, was thrown off his Horse against some of the Bars in *Smithfield*, whereby the *Calvaria* or Hairy Scalp was torn up from the coronal Suture to the temporal Muscle, on the left side; the Scull was bared between 2 and 3 Inches in breadth. He was led to the next Barber, who cut the piece off, and hanged it up in his Shop. The day after the Patient was brought to me. I caused the Hair to be shaved off from about the Wound, and dress'd the Bone and Lips with *Liniment. Arcei* warm, embrocated the Parts about *cum ol. ros. & chamamel.* and applied *empl. è bolo* over the Wound, with Compress and Bandage rowling up his Head. He had been let blood the day before without consideration of the great quantity which he had lost from his Wound. I continued the former way of dressing the Wound and Bone, until they were well digested: during which the edges of the Bone incarning round, I rasped the middle of the Bone, and thereby disposed a *Callus* to put forth. After Digestion, I deterged with *mundif. Paracelsi*; and as the *Callus* thrust off the Bone, I dress'd it with Pledgits dipt in *spir. vini* prest out dry, and afterwards by Epuloticks, as *unguent. tutia, &c.* cicatrized the Lips of the Wound even with the *Callus* which rose from the Bone; and about that time, to dispose it the better to cicatrize, he was purged. Thus it was cured as Wounds with Loss of Substance; a troublesome and vexatious work to the Patient and Chirurgeon; which might at first have been cured by Agglutination, with a lels *Cicatrix*, and thereby he might have enjoyed the natural tegument of his Hair, whereas now that part remained bald and unseemly.

A Servant

7. Observat.
of a
contused
Wound.

A Servant of the King's of about 28 years of age, being distracted, and suspicious that every Man he saw would do him a mischief, walking abroad one day, thought himself pursued, and ran into the next House up two pair of stairs into a Chamber, when hearing some body following him he threw himself out of the Window just as a Coach was passing by, and pitcht with his Head upon one of the Wheels. He was taken up stunned and shrewdly wounded, carried into the next house, and drest by a Chirurgeon, who also let him blood. The next day I was sent by his Majesty's command to take care of him, and saw the Dressings taken off. His wound was between the Sagittal and Coronal Sutures to the Bone, with great attrition of the Hairy Scalp. I considering the manner of his Fall, with the Frenzy and Stupor he lay under, opened his Wound by a cross Incision, and cutting off the corner'd Lips, dressed it up with dry Dossils of Lint, with Astringents and Bandage. I directed a Clyster to be administred that afternoon, and let him blood that night, repeating it again the day after. Dr. Walter Needham prescribed him an Emulsion of the cold Seeds, &c. to drink often in a day. By all which he was notably relieved, and recovered his Senses soon after. I opened his Wound the third day, and saw the *Cranium* smooth and natural, the Lips also tending to Digestion. I fomented it with a Stupe wrung out of Claret-wine, and dress'd it up with a Digestive *ex terebinth. cum vitello ovi*, and embrocating the Parts about *cum oleo rosar.* applied *emplastr. diachalcit.* with Compress and Bandage. After I had thus digested the Wound, I rasped the *Cranium* to the quick, dressing it up with *unguent. Arcei*, and the Lips of the Wound with *unguent. diapompholyg.* and by the help of the Vitriol-stone I deterged them: and as the *Callos* grew up out of the *Cranium* to unite with the Lips, I dressed it with Pledgits pressed out of *spir. vini*, cicatrized it, and restored him cured.

8. Observat.
of a
great
contused
Wound.

A Cook-maid, by the fall of a Jack-weight upon her Head, was beaten down, and stunned for some while by the Blow: she vomited, and was carried into her Chamber. There were three Wounds in the Hairy Scalp to the *Cranium*, with a great Tumour: The Bone seemed to me to be deprest and fissured. I presently made a circular Incision, and raised up that part of the Hairy Scalp in order to Terebration, and filled up the wound with Dossils of Lint prest out of Red wine; then embrocated her Head with *ol. ros. cum aceto*, and put on *empl. è bolo* with Compress: then shaving the Hair from the Parts about, I applied Pledgits spread with my Digestive upon the Lips of the Wound, Compresses dipt in Oxycrate, and rowled up her Head. Some hours after I caused her to be let blood about 8 Ounces, and that night gave her *3vj. syr. de meconio* in a draught of *aq. papaver.* with a little *aq. cardiac.* The next day I took off Dressings, and viewing well the bare Bone, I found neither Depression nor Fissure. I was deceived by the shape of her Head, she being double-crowned, the Tumour great, and the Sagittal Suture running underneath. I fomented the Parts affected with *vin. rubr.* wherein were decocted *flor. ros. rub. cham. flor. beton. summit. absinth. bacc. myrtill.* &c. then dress'd the Bone and Lips, the former with *liniment. Arcei* warm, and the latter with my Digestive *ex terebinth.* dipt in *ol. hyperici* warm: and having embrocated her Head well with *ol. ros. & cham.* I applied a Cataplasm *ex farin. hord. pulv. balauft. & ros. rubr.* decocted in Oxycrate *cum ol. ros.* with convenient Bandage. This method I continued till the Wound was digested and the Tumour wasted. Then I deterged the Lips of the wound with *mundif. Paracels.* and the Vitriol-stone, dressing the Bone with Sarcoticks, and applied over all one of *Vigo's* Cerots instead of the Cataplasm. By this method the Bone incarned; after which she retired with Medicaments to be drest by some of her Fellow Servants at her Master's house a few Miles off. She sometimes came to Town and was assisted

assisted by me in the cicatrizing of the Wound, so as hath been shewed in the former Laceration of the *Calvaria*. I did not believe so great a Blow could have been without a Fracture and great Accidents; otherwise I should not so presently have raised off the Hairy Scalp.

9. Observation of Concussions on the Forehead and Face.

A Tradesman returning from visiting some of his Friends in the Country, near *Knights-bridge* fell off his Horse to the ground, bruising and wounding his Forehead and Face. He was taken up for dead; but some while after recovering life again, they put him into a Coach, and brought him to his house. I found him in his bed labouring under a great Concussion. He was not capable of giving any account of his Ailment. His Face and Nose were much bruised; there was also a Wound upon the *Os cribriforme*. I caused the Blood and Gravel to be wash'd out of his Wound, and with my Knife laid it open a little higher up towards the Forehead. Then viewing the Bone, and seeing it without Fissure, I brought the Lips close together, and dress'd the Wound with Agglutinatives, and *empl. è bolo* over it and his Face; and having caused the Hair to be shaved off the fore-part of his Head, from the Coronal Suture down to his Ears, and embrocated the diseased Parts with *ol. ros. cum aceto*, I applied a Cataplasm of *farin. hord. pulv. flor. ros. rubr. balauft. bacc. myrtill.* decocted in Oxy-mel, then let him bleed 10 or 12 Ounces. A neighbouring Physician visited him that night, and prescribed what he thought necessary. The Patient lay dozing all that night, groaning frequently, and was no better in the morning: he spake not willingly to any of us, nor so as we could understand what he said. That day I took off Dressings, viewed and felt the Parts about. The left Eye was inflamed, the Lid swelled, and the Forehead bruised. I was not able to make out any thing whereby I might take new Indications; and therefore dress'd him up again as before, ordering a little Breast-milk to be dropt warm into his Eye, and renewing the Embrocation and Cataplasm. That day he was let blood again, and a Clyster administered, with what else his Physician thought necessary. The next day he being nothing better, the deceased Mr. *Boun* a Chirurgion was consulted. We took off Dressings, and viewed the Wound. The Bone was fair, without the least impression. Mr. *B.* concluded that the Wound should be cured without farther enquiry into it; which accordingly was done in few days after without Exfoliation. Blistering of his Neck and Shoulders, and Cupping with Scarification was made; also Fontanels behind his Ears; Fomentations and Plaisters were likewise applied to his Head: but the Relief was small. Yet by these and frequent Purging, after a month or six weeks, he was so well as to get abroad, but was indisposed in his Head. His Eye was cured; but after he had followed his affairs abroad some weeks, on a sudden that Eye-lid fell down, and some months after he lost the Sight of the Eye without any outward Soreness, it being the effect of the Concussion. He was alive at the time of the Fire, and may be so still for ought I know. If ought was omitted for his Recovery, it was further Bleeding.

10. Observation of another Concussion, with a broken Leg.

A Gentleman of about 30 years of age, coming out of *Hartfordshire* through *Tottenham*, and riding upon the Causey near an Inn, one emptying a Chamber-pot out of the window as he was passing by, his Horse started, and rushed violently between the Sign-post and a Tree which supported part of the Sign. The poor Gentleman was beaten off his Horse, and lay stunned on the ground. The People fetch'd immediately a Barber-Chirurgion from *London*. Sir *T. B.* upon notice of his Friend's mishap, sent me thither; where I found the Gentleman lying upon the ground, the People and the Chirurgion gazing upon him. I felt his Pulse much oppress'd, the right Brow bruised, and inquired whether they had let him bleed. The Chirurgion replied, he had opened a Vein in his Arm

but

but it would not bleed. I replied, We must make him bleed, though it be by flitting his Veins. Turning his head on one side, I saw the jugular Vein on the bruised side turgid, and opened it. He bled freely. After I had taken about 12 Ounces, the Blood ran down from his Arm, which had been opened before and would not bleed. We bled him till he came to life, and then he raved and struggled with us. Having stopt the bleeding, we caused the People to carry him into the Inn, and put him into a Bed. All the while they carried him, and were making him unready, he roared and was very unruly, especially whilst they were pulling off his Stocking from his Right Leg; which inquiring more particularly into, we found broken short in the middle of the Thigh-bone, close by a bony Wen, (of the bigness of a Tennis ball.) Upon sight whereof we prepared Dressings, and endeavoured to set the Fracture. He opposed us mainly in the setting of it and dressing it up. But some of the people holding him down in his Bed, we set and dress'd his Leg as is shewed in the Lecture of simple Fractures. But his Hands being at liberty, he loosened the Bandage which we had put on the fractured Bones in spite of our Resistance. We contented our selves in what we had endeavoured, and from that time left his Leg to lie unset he not permitting so much as a Plaister over it. We then prepared Applications for his Head, shaved the hair from that side of the Temporal Muscle, embrocated the part which seemed to us affected *cum ol. ros. & aceto*, and applied a Cataplasm of Bean-meal (which was speediest to be had) boiled up with Oxymel, &c. he permitting it patiently. That bound on, I left my Assistant to stay with him, and returned my self to London. The next day Sir T. B. sent for Sir Charles Scarborough, and carried us with him to Tottenham, where we found the Patient raving, and by their report he had done so all night. We understood not one word he spake. His Pulse was low and intermitting. Upon which consideration Venæsection was deferred. What was necessary for him to take, the Physician then prescribed. His Bruise was upon the Temporal Muscle, a part not to be laid open upon a bare surmise; wherefore we renewed our Embrocations and Cataplasms, and left my Assistant to wait upon the Patient, Sir Charles Scarborough making a Journey farther into the Country. The next day I returned, and finding the Patient raving as I had left him, I supposing his Distemper proceeded from an Inflammation of the Membranes of the Brain, and that by Venæsection only he was to be relieved, I let him blood on the same Jugular as before about 10 Ounces, and so proceeded every day or second day at least, the Patient bearing it well, and seeming to be relieved. His Pulse rose upon it, and he slumbered sometimes, and took his Nourishment, which before he did not. About the seventeenth day I coming to Tottenham met my Assistant going to London, who told me, that the Patient was grown more sensible of his fractured Thigh. I perswaded him back, rejoycing to hear that the Gentleman was so well: but coming near his Chamber, I heard him hallowing. It troubled me what to do. I knew his Bleeding had much relieved him; but the People, as also my Assistant, disliked my so often letting him blood, and was wont abusively to say, Now you shall see our Master let him blood again: they concluding that I would be the death of the Patient. However I resolved to bleed him once more, and no more. This I declared, with the necessity of doing it, and accordingly opened the same Vein again, and held a white stone Porringer to receive the Blood, which flowed with a sprightly Stream, the Patient lying quietly the while upon his back. I put the Porringer into my Assistant's hand, and seeing the blood flow with much Vigour, I catcht up hastily a Pewter-porringer, purposing to take a little in that. (In bleeding these Veins in the Neck, we usually holding the Porringer close to their Neck,

A great
bony
Wen.

it

it serves us a Bandage to intercept the Descent of the blood.) I put this Porringer into my Assistant's hands, with pretence to make Dressing to lay upon the Vein; but stood at a little distance, looking my Patient in his Face, with a Resolution to bleed him until I saw his Countenance change: which I did, and then stepped to the Patient to stop the Vein. The while the Porringer was taken away, the blood ran out of it on one side, it having been melted, and the hole so covered by Solder that I did not see it before. During the while he was bleeding I thought him long, and wondered to see so little blood in that Porringer from so full a stream: but seeing the Bed so bloody, it was evident that when the melted hole press'd not against his Neck, the blood ran into the Bed, which deceived me. But the Patient upon taking a little of his Cordial Julep refresh'd his Spirits. I sate a while by him, and left him pretty hearty. The next day I returned sooner than I used to do, being doubtful how I should find him: but, to my wonder, he was perfectly well in his Senses, and discoursed soberly of what Passages he remembered in the time of his *Delirium*. We presently prepared to set his fractured Thigh-bone, it having lain 17 days unset, yet was without Inflammation, Tumour, or Pain. The *Callus* I suppose was thrust out at the ends of the Bones, and had covered the asperity of them, and the large bleeding and Disease had made Revulsion and Evacuation. We brought the ends of the Bone together by an easie Extension, and dress'd it up as is usual in simple Fractures. In less than 20 days the *Callus* dried, and his Leg was so strong as to bear him again; and some weeks after he went abroad about his Affairs.

11. Observat. of a Fracture with a long Fissure and depression of the Cranium.

A Youth about 10 years of age was struck down by a Blow of a Cudgel on his Head. I found him lying upon a Bed deprived of his Speech and the use of his Legs. Taking the Plaister off his Forehead, there was no wound nor considerable Swelling; but searching with my Fingers I felt a Depression of the Bone: upon which, having advertised the Parents of the Danger of the Child, and the way of my proceeding, I sent for the Chirurgeon dwelling at the next door, who had applied the first Plaister, desiring to retain him for the more constant attendance. We made Dressings ready in order to Dilatation; then causing the Hair to be shaved off, I made an Incision so large as to set on the *Terebra*, if occasion should be, for the raising up the deprest Bone. In dividing the Hairy Scalp towards the Coronal Suture, I espied a Fissure running up from the fractured Bone beyond my first Incision; wherefore I laid the Fissure more open, out of which I saw a quantity of serous blood flow immediately forth. The Depression was a piece of Bone as broad as a Three-pence sunk under the Scull. I filled up the Opening with Dossils of dry Lint, and applied over all a Digestive *ex terebinth. & vitell. ovi* upon Pledgits, and *empl. e bolo*, with Bandage to keep them on. The next day in the presence of Dr. Barwick and some Country Physician with Mr. Arris Chirurgeon, I took off the Dressings, and set the Trepan above the fractured Bone, so to avoid the great Scar that must have been if I had set it below the Fracture, and considering withal the Poriness of the Bone below. The *Terebra* set on, the Bone taken out, and the inner edges smooth'd by the Lenticular Instrument, I put in a Levator, and raised up the deprest Bone even with the rest: That done, I placed in a Sindon dipt in *ol. ros.* with a third part of Resin; then with a round Dossil filled up the Bore: after which I opened the Fissure with my Rugines, scraping away its edges, that no *Sanies* or Matter might be detain'd, and dress'd up the Bone with *liniment. Arcei* warm, so as to give way to the Lips to fall in; I desiring no more Opening than was necessary for discharge of the Matter from within. Over these Dressings I applied *empl. diachalcit.* malaxed *cum ol. ros. & aceto*, and with Compress and Bandage concluded the

second

second Dressing. From that time all our threatening Symptoms vanished. Indeed the first opening and Letting blood that same night recovered his Speech; and after this Dressing the use of his Legs was also restored: yet we kept him in the dark, and to a slender Diet, allowing no Flesh. What concerned Internals Dr. *Berwick* took care of. The other Physician and Mr. *Arri*s coming no more, I continued the same method in my Dressing until Digestion, which was made in 4 or 5 days. Then I added *mel. ros.* instead of the Oil, and afterwards incarnated, by increasing the Resin and lessening the *mel*; the Flesh rising in little grains presently after the digestion was compleated, and after a fews days covered the *Duramater*. I hastned the Exfoliation of the Bones by the application of *tinct. Myrrhæ*, and deterged the wounded Lips with *mundif. Paracelsi*. My work being afterwards to keep down the loose Flesh, I rubb'd it frequently with the Vitriol or Alume-stone, and dressed the Lips with *unguent. tutia*, &c. whereby in less than six weeks the Bones exfoliated, and the Wound being ready to cicatrize, I left it to the neighbouring Chirurgeon; the cicatrizing of these being for the most part the work of my Servant.

A Person was wounded near the *Vertex* (by a Blow I told you in the former Edition, but have been since informed it was) by a Puncture of a Dagger. He sent for a Chirurgeon, who dress'd his Wound and cured it; during which the Patient went daily abroad without any consideration of it. About the seventeenth day, towards the Full-moon, as he was coming home one Morning, he felt his Legs falter, and before he was got up stairs into his Chamber his Tongue failed him. His Friends and Servants put him into Bed, and sent for me. They declared to me how he had been wounded such a day, and the manner of his being seized with the *Paralysis*. I saw a necessity of laying open the Hairy Scalp, and offered to go away, that I might send for some of my Servants to help me. He apprehending that I was leaving him as deplorable, catcht hold of me, and would have spoke to me, but could not. He made signs for Pen, Ink and Paper, and endeavoured to write, but could not form one Letter. He then threw himself down in his Bed, breathing out *Jes*. I prayed his Patience telling him I would return suddenly. But before I went I let him blood 10 Ounces, and returned again within an hour, and found that he had lost the use of his Arms. I considered the Wound, and concluding a necessity of setting on a Trepan, I caused his Head to be presently shaved, and made a circular Incision about the Wound. Then raising up the Hairy Scalp smooth off with my *Spatula*, I both saw and felt the Bone, but could discover no Fault in it. I dried up the Blood with Sponges dipt in Vinegar, raised up the Lips round with my *Spatula* from the Bone, and with a fresh Sponge having dried up the Blood, I looked again under them; but could discover nothing ill in the bared *Cranium*. I then fill'd up the Wound with Dossils of dry Lint, and applied a Digestive *ex terebinth.* over the Lips, embrocating the Parts about *cum ol. ros.* and laid on a Cataplasme *à farin. hord. flor. ros. rubr. balauft. in vino rub.* with *syr. de ros. succ.* &c. That day Sir *Fr. Prnj.* gave him a visit, and prescribed him a Clyster, Cordials, Juleps, and what else he thought necessary. The next day was Full-moon, at which time the Brain is thought to rise high, and the Vessels are turgid; wherefore I deferred the setting on the Trepan, contenting my self with the letting him blood again. All this while he was in a Fever, and depriv'd of his Speech and Limbs. The next morning, between 10 and 11 of the clock, in the presence of Sir *Fr. Prnj.* Serj. *Pyle*, Mr. *Arri*s and Mr. *R.* who thought himself concerned for his Servant, and had first dress'd him, I took off Dressings, and look'd into the Wound. We found no Fissure, however there was a necessity of perforating the *Cranium*. Wherefore without delay I began to work with the Trepan, which I much

12. Observat. of a contused wound by a Puncture in the crown.

prefer before a Trephine, it being an Instrument which doth its work lightly, and cutteth the Bone equally, or how you please, without pressing so heavily upon the Head, and is approved by all the Chirurgeons abroad, being much to be commended before the Trephine. After I had bored the Bone, and taken it out, I look'd into the hole, and seeing the *Dura mater* retain its natural colour, without Matter or Blood, I dress'd it up with a Sindon dipt in *ol. ros.* with a little Refin warm. This way of dressing was objected against, as I expected; but I dress'd it up, and assured them that I would cure this Patient without applying any other Remedy to the *Dura mater* than these two simple Medicaments: but withal, I was much unsatisfied in my self, that such grievous Symptoms, as loss of Speech and Limbs, with a Fever, should afflict the Patient, and yet no deprest Bone or Fissure, nor ought of Matter or *Sanies* appear upon the *Dura mater*. This, I say, troubled me much, I fearing some other place, or that the Blood lay putrefied under the *Dura mater*. But I dress'd it up with a soft round Dossil next the Sindon, and the Bone with *Animent. Arcei*, continued the Digestive to the Lips of the Wound, and applied an *empl. de beton. mag.* over all, then laid him down in his Bed. Going presently out of his close Room (where I was crowded up with great Lights burning near me) into the fresh Air, I presently burst out with a violent Coughing of Blood: yet the next day I dress'd the Patient again, and found his Speech and Limbs restored; but he was hot, and his Pulse quick. I opened his Wound, and finding all as well as I could expect, I dress'd up the *Dura mater* again as before, with the same Oil and Refin: and after I had bound him up as is usual in these Cases, I let him blood 10 Ounces, and advised the repeating of Clysters, &c. as occasion should offer. The Physicians and Chirurgeons visited him no more after the first dressing; but I retained the young Chirurgeon that had first dress'd his little Wound, he dwelling near the Patient. After 3 or 4 days dressing, this Wound digested, and all the Symptoms went off. Upon which consideration I diminished the quantity of *ol. ros.* and increased the Refin; making good my word in curing him with those simple Medicaments; I deterging and incarning as firmly and speedily this way as by any Sarcotick I ever used. While the Bones were casting off, I cicatrized the Lips as hath been set down in the preceding Observations. Coming once to dress him while the Wound was cicatrizing, he being abroad, I substituted the young Chirurgeon in my place; yet I saw him twice or thrice dressed afterwards. He was well cured, and remaineth so to this day.

13. Observat.
vat. of a
Concussion
of the
Brain.

I was called to consult with Dr. Tho. Cox, about a Gentlewoman who was grievously diseased with a great pain between the Coronal and Sagittal Sutures, occasioned by a Blow she had many Months before received riding under a Pent-house. The Blow had stunned her, yet she recovering her Senses was brought to London, and viewed by some Chirurgeons of the City, who cured her little Wound, and returned her back: but from that time her Pain increased daily with a *Vertigo*, and she returned again to London. We judged it to arise from that Blow, and concluded the extravasated and putrefied Blood had caused that Pain. We viewed the Hairy Scalp, and took notice that it was thicker in the upper parts of it than was usual; but we could not distinguish with our Fingers any inequality under it in one part or other. The Humour was pituitous and yielded to the Pressure of the Finger, as such Swellings do. She endeavoured to point to us the place with her Finger, but could not fix it within so narrow a compass (as we might certainly relieve her by laying it open. At that Consultation we resolved to begin with Fomentations and Cataplasms to discuss the Humour, and to make Derivation by Bleeding, Cupping, Blistering and Purging: all which was afterwards done; but proving ineffectual, we proposed the laying open that part of the Scalp which appeared

appeared to us most suspicious, and to set on a Trepan : but she would not admit of it. At length, feeling her self languishing, she yielded to the making a Fontanel in the part most affected by a Caustick. Which I did, and, by Dr. Cox's Consent, I made it to the Bone, and so large, that I might afterwards set on a Trepan ; and then dressed it with Leniments. After separation of the Escar, there appeared neither Fracture nor Fissure. We moistned the Bone with Ink, and rubbed it out again : but no Mark of the Ink remaining, I rasped it ; and no Crack appearing, I sprinkled the Bone with *pulv. myrrh. aloes*, &c. and drest the Ulcer with *basilic.* &c. Her Pain increasing, with other Indispositions which threatned her life, she yielded to the application of a Trepan ; which accordingly I set on, and opening the Skull, found the *Dura mater* retaining its natural colour, but a smell arose from within as in corrupt Wounds of the Brain. I drest it up with Lenients as the former, *viz. ol. ros.* and a little Resin. The next day I dressed her again, and found the Wound digesting ; yet was she extremely stupefied with the excess of pain in her Head. The third day I drest her again, and in the Opening found good Digestion, and a beginning to incarn, a little red Flesh arising upon the *Dura mater*. The next day it was increased, and so the next : but when I opened it a day or two after, I found the Lips of the Wound sinking, and little Matter ; but that which appeared was of good colour. The *Dura mater* seemed drier, the little ruddy Flesh was not increased. The next day the little Flesh upon the *Dura mater* beginning to look pale, I then left off the *ol. ros.* and added, *mel. ros.* to the Resin, with a little *pulv. myrrhæ*, and a few drops of *ol. terebinth.* and drest the Lips of the Ulcer with *unguent. basilic. mag. Vigon. cum ol. terebinth.* warm, laying over the bared *Cranium* Lint dipt in a Tincture of Myrrh, Aloes, &c. and applying *empl. melilot.* with a good Compress wrung out of a *Lixivium* wherein was boiled some of the greater Cephalicks, as *flor. anth. beton. majoran. origan.* &c. But that night she was seized with Convulsions, and the next day after the Lips of the Wound appeared without heat ; all things looked ill ; and she died within a day or two after. We would have opened her Head, but she had forbid it : but in bowing her Head a putrid Matter of a brown colour flowed forth her Nostrils, of the same smell that I complained of in Trepanning the Bone, only more foetid. I believe this Putrefaction proceeded from the corrupt blood extravasated between the *Pia* and *Dura mater* ; which at first by large Bleeding and proper Applications might have been relieved. Nay possibly, if we had timely opened the *Dura mater*, this Matter might have there discharged it self. But if it had been attempted, and not succeeded, her Death would certainly have been imputed to that.

A little Girl was brought to me with a soft Swelling upon the left side of her Head, about two fingers off the Temporal Muscle, of the bigness and shape of half a great French Walnut. This Swelling happened from a fall down a pair of Stairs some weeks before : but, whether through ignorance or negligence, the Fracture was not suspected by them, though there were visible Symptoms of Concussion, as that of Vomiting, &c. The Child even languishing of it, I acquainted the Mother, that the only way to relieve her Child was by opening that Tumour wide, and afterwards I supposed that there required as much to be done to the Skull underneath. She prayed my help and submitted to the laying open the Swelling, or what else I should think fit to be done. The way of opening this in a stronger Body had been, to have cut round the Tumour, and raised off the Skin : but the Child was so weak, that I feared it might the while die under my hands. Wherefore to avoid that danger, I applied a mild Caustick, and delivered the Child to her Mother, who bound on the Dressings, and carried her home. About two hours after I took off the

14. Observation of a large Fissure, the *Dura mater* putrefied.

Cautstick, and finding it had workt well, I divided the Escar, and discharged about three or four Spoonfuls of a filthy *Sanies*. I took off this Cautstick the sooner, suspecting lest it might by longer lying penetrate through, and offend the Parts within. Upon dividing this Escar, the Bone appeared bare the whole length, and a long Fissure ran transverse over from the Temporal Muscle backward: the Scull was very thin, yielding to the least pressure of my Finger, as a piece of Vellum; so that I might have enlarged it with my Knife, if I had thought it necessary. I bowed the Child's Head on one side, and dropt in a little *mel. ros.* with a few drops of Tincture of Myrrh, Aloes, &c. and with Pledgits dipt in the same lightly covered up the Bone. Then dressed up the Escar with *unguent. basilic.* malaxed *cum oleo liliorum*, and laid a cephalick Emplaster over all, with convenient Bandage. I continued the same method of dressing daily, and saw pieces of the *Dura mater* purge out and hang in the fissured edges of the Bone; and for some while a thin *Ichor* issued there-out: The Escar being separated, I dressed the Lips with *mundif. Paracelsi*, and the Bone with *liniment. Arcei*, dropping into the Fissure the Balsam prescribed by *Vigo*; by which it incarned, and, as the Bone exfoliated, united with the Lips of the Ulcer. There was a Tumour behind the Ear before I began the Cure: but by embrocating it with *ol. ros.* daily, it went off after the Digestion of the Ulcer above. Thus this Infant was cured: but she being the product of a diseased Mother, grew lame about a year after of a Pain in her right Hip, whether it happened by accident of a Fall, or that it was Strumous; but when I saw it, it was dislocated. I suppose no rational man will believe this Accident on her Head occasioned that Defluxion on her Hip.

15. Observation of Caries through the Cranium, where in the Pericranium and Dura mater were grown together.

A Gentlewoman fell down with her Child of half a year old in her Arms. The Mother was hurt, and the Child a little scratched on the left side of its Head. It was viewed by some Pretender to skill in such things, and judged inconsiderable: but from that time the Child grew indisposed, and vomited often, especially after the receiving her sustenance; and as she grew able to speak, complained of a pain in that part of her Head; and by reason of her often vomiting and constant pain in her Head, she languished daily. After 10 years, a small Tumour appeared in that part of the Head where it had been hurt. They again consulted, and afterwards brought the Child to me a very Starvling. I viewed the Tumour, and felt in it a Pulsation, which at first I thought an *Aneurisma*: but pressing my Finger more into it, I felt the Membrane of the Brain without any Scull the breadth of an old *English* Shilling. This at first a little amazed me: but upon consideration of the Fall, and the Symptoms succeeding, it was evident to me that by the Fall the Scull was fissured, and being of a thin cartilaginous substance at that time of her Infancy, had through continuance mouldred away; and the *Dura mater* thrusting outwards, had by Adhesion to the *Pericranium* united in one body with it. This I supposed the case. The Presage here was a sudden death, if the Cure was not attempted: and in the attempting it she was in great danger. To begin this Operation by a circular Incision, the compass of the Tumour in the Scull, was not difficult: but then to separate these two Membranes, the *Dura mater* from the *Pericranium*, or this from that, was an hard task even in a dead Body; here in a weak Child much more, where the blood would be apt to blind me, and the impatience of the Child render it hazardous, the work of Separation requiring a great Steadiness in both of us. Wherefore I resolved to lay the Scalp open by Cautstick. To which purpose, forewarned them first of the danger, either in leaving the Child to die by its Malady, or in attempting the Cure doubtfully. But they having consulted others before, were sensible of the danger the Child was in by its Disease, and readily commended her into my hands,

hands, and lodged her near me. I caused the Hair to be shaved off from the Tumour, and applied upon it the most gentle Caustick I could design. At such time as I thought it might have made its way through the Superficies of the *Calvaria*, I took it off, and with a Caustick stone, rubbed into the musculous Skin; then washt out the Salts well, with Wine first, then Milk. After that I embrocated it with warm Oil, and cut into the Escar, embrocated the Part again, and drest it up *cum unguent. basilic.* with *ol. ros.* applying *emplastrum è bolo* over all, with Compress and Bandage. That night she was seized with a fit of Convulsion, frequently vomited, and was very ill. Doctor *Fisher* was fetcht, and prescribed her a Cordial Julep proper in her case, and relieved her. The next morning I took off Dressings, and raised up the Hairy scalp round from the Scull so far as the Caustick had spread, which gave a breathing to it, and discharged a little *Ichor*. From that time her Vomiting ceased, as also the Convulsive fits, and she began to be more lively than in ten years before. We kept her in bed warm and close, and prescribed her a slender Diet, allowing her only Spoon-meats. Her Physician took care in what concerned her health by Internals. I proceeded to hasten Digestion, and by Fomentations and the like to cherish the native heat of the Part. Some places I digested, others I deterged. It was a nice work, but succeeded happily. Whilst some Sloughs were separating, other parts incarned and cicatrized. The Patient at length being in a fair way of Recovery, I invited Sir *Ch. Scarborough* and Doctor *Walter Needham* to see her dressed. The *Dura mater* was then incarned, and the edges of the Bone exfoliating; after which the Wound cicatrized, and contracted to a very narrow compass. The Child afterwards returned to her Friends perfectly in health, and is a witty Child; but it's thought she will be but a Dwarf.

A Person of Honour about ten years of age, by accident of a Fall from his Horse, bruised his Head on the right side a little above the Temporal Muscle. He was somewhat stunned by the Fall, and vomited. Going to him within an hour after, I felt a large Tumor in that place, and judging the Scull to be fractured, proposed the laying it open. But the Physician not being come, I opened the Jugular Vein on that side, took away some ounces of blood, and prepared Dressings. Doctor *Lowre* being come, I laid open the *Cranium* by a circular Incision, and discovering a Fissure, filled up the place with Dossils of dry Lint, *pulv. Galeni & empl. è bolo*, with Compress and Bandage over all. The next morning we found our patient relieved; a Clyster was administered that day; and the day after, the Physician and Mr. *Hollier* being present, we took off Dressings, and saw a large Fissure stretching from the Coronal Suture to the Temporal Muscle. The Serosity being discharged thereby, and the Patient freed from the preceding Symptoms, I did not think it necessary to set on a Trepan: but it being by others thought reasonable, to prevent farther dispute, I complied with them. But then the Patient's Relations and Friends desired to be informed what Instruments we would use, and asked to see them. I shewed them a Trepan and Trepine, and gave them liberty to try both upon a Scull. They did so, and unanimously preferred the Trepan, which accordingly I set on in the declining part, somewhat distant from the Fissure; and after Perforation dressed the *Dura mater* with *ol. ros.* and Resin, the *Cranium* with dry Lint, and the Lips with a Digestive *ex terebinth.* &c. then embrocated the Parts about, and applied *empl. è bolo* with Bandage. By the application of these the *Dura mater* digested, and soon after incarned. But the Serosity discharging by the Fissure, the Evacuation by the Perforation of the Trepan was small, and thought not sufficient. I being desirous to justify my way of dressing, yet ready to comply

16. Obser-
vat. of a
large Fiss-
sure by
contusion
without a
wound.

with

with the common practice, dressed it up with *mel. ros. & spir. vini*. But the Matter at next dressing appeared less; and the day after we found the ruddy Flesh upon the *Dura mater* pale and withering. I applied again the *ol. ros.* and Resin, and at the next dressing saw the Flesh ruddy and better digested; and after a dressing or two the Membrane so incarned, that I was glad to keep it within compass by the application of a Dossil of dry Lint: and from that time my business was to suppress it with *Mer. præcipitat.* and good Compression. During this the *Cranium* was drest with Pledgits prest out of *spir. vini*; and while the Bone was exfoliating, we deterged and cicatrized the Lips, disposing them to incarn with the Flesh rising from the exfoliated edges of the Bone. At length the Bone changed colour and shook. It appearing afterwards loose, I raised it up with a *Spatula*, and took it off; we supposing it an Exfoliation. But by the pulsation in the Flesh under, it appeared to be both Tables of the *Cranium*. If you will ask the occasion of this, I must tell you, that, according to our judgments, it was the effect of the Contusion, of which there indeed appeared no marks: yet without doubt, by the force of the Blow the heat was extinguished in the Bone, and as a dead Bone it separated. And this sort of Contusions is taken notice of by the Ancients. It is without danger to the Patient, if there be a sufficient Discharge otherwise for the Matter, as here there was by the Fissure. This Pulsation lessened as the Flesh grew callous and hardned, which it did soon after into a Bone. About which time the fissured Bone cast off its edges, and that Fissure incarned, and supplied the place of the Bone; the Wound also cicatrized by the common Epuloticks. This young person had formerly been subject to pains in his Head and frequent Vomiting from his Infancy, upon which account we did not hasten the cicatrizing it; but after Purgings, &c. we cicatrized, and he enjoyeth a better health since.

17 Obser-
vat. of a
Fissure
with a
Fracture
and de-
pression of
the *Crani-
um* under
the tem-
poral mu-
scle.

A young Fellow, a Mason by Trade, being at work with others making a Stack of Chimneys three Stories high, the Foundation of the House sunk under him. He was taken up speechless; but being presently let blood by a Noble Lady's advise, he recovered his Senses, and was removing to his Lodging. The Part contused and swelled was the right Temporal Muscle, and that side of his Head. He vomited often, and had shrewd Symptoms of a Fracture, I caused the Hair to be shaved off, and made an Incision in the upper part of the Tumour, from his Ear forward, above two inches in length, passing as near the Temporal Muscle as I durst; and having at the same time divided the *Pericranium*, I thrust it off from the Bone; then with a Sponge prest out of Red Wine wiped away the blood, and saw a Fissure running the whole length of the Wound. I also espied another Fissure stretching from this downwards towards the external *Canthus* of that Eye; and the lower I pressed with my Finger, the more rough the Bone felt. I was unwilling to cut the Temporal Muscle; but there seeming to me a necessity of it, I drew my Knife downward, and laid open the Wound in the form of a Roman T. But the lower Lips, being musculous, would not so turn back to bare the fractured Bone as I designed, therefore I contented my self with what I had done, and filled up the Wound with Dossils of Lint, embrocating the Parts about with *ol. ros. cum album. ovi*, and applying *empl. è bolo* over it, with Compress and Bandage, then laid him to rest with an Anodyne draught. The next morning I found the Patient in a Fever. He had rested ill, and had vomited often, and complained of much pain in that lower Jaw, I took off the Bandage and Emplaster, and drest the Lips of the Wound with a Digestive *ex terebinth.* &c. upon the Pledgits dipt in *ol. hyperici* hot, embrocating the Parts about with *ol. cham. & ros.* and applied a Cataplasm *ex far. bord. flor. ros. rub. balauft.* &c.

&c. as you may find it described in the method of Cure. Then we let him blood in that Jugular, and advised a Clyster: a Ptisan and contempering Juleps were also made him. Having afterwards considered of the necessity of making more way to the depressed Bone, and the danger which might happen by cutting more of this Muscle, I resolved to consult Doctor *Walter Needham*: to which purpose I sent to him, and he accordingly met me the next day. We found the Patient restless, and accompanied with an increase of all the formentioned ill Symptoms. We took off Dressings, and discerned the upper Lips of the Wound digested, but the lower more dry and swelled, especially upon the lower part of the Temporal Muscle; upon the pressure whereof a white Matter discharged from within, between the *Cranium* and muscular Flesh, where we judged the Depression of the Bone to be. There was a necessity of cutting off part of the Temporal Muscle, and that in the form of Semicircle: wherefore we marked it with Ink from the upper part, so passing within an inch or more of the external *Canthus* of the Eye, and carrying towards the Ear, to take off that Lip which was lying over the Depressure. This being so marked, we cut it off. There was an effusion of blood out of both ends of the Arteries: but having Dossils ready dipt in the Royal Stiptick, we applied them; and having filled up the bared *Cranium* with our Dressings, we bound up the Wound. From this time his Jaw was so weak, that we were forced to muffle it up with Chin-cloaths. At our next dressing we set on a Trepan: after which with a Levator we raised up the depressed Bone, and dropt into that Wound a Solution of *resina in mell. ros.* We then drest the trepann'd hole with *ol. ros.* upon a soft Dossil; and the rest of the *Cranium* we cover'd with Dossils prest out of *spir. vini*, and applied Digestives over the Lips of the Wound. At the second Dressing Doctor *Walter Needham* was present, and saw the *Dura mater* under the trepann'd Bone incarned so well, that from that time we only applied a little round Dossil to keep the Flesh from thrusting out of it. But from the Fracture below much purulent Matter came away daily: we supposed it was the more increased, by reason of the hollowness which it had made between the Muscles and fractured Bone, which being depending, did yet retain its Cavity, notwithstanding our endeavours by Compress and Bandage. Therefore to prevent the enlarging of that Cavity, we applied a Caustick on the outside, and the next day divided it; from which time the Matter discharged it self that way, and thereby the internal Cavity was disposed to cure. The Fissure that stretched it self from his Ear towards his Brow did lie so undiscovered, that we neither saw beginning nor ending of it; nor did we care: that part of it which we saw served to discharge the *Serum* sufficiently. I rasped the *Cranium*, and covered it up with Dossils dipt in *spir. vini*, &c. keeping them close to the Lips of the Wound; and by timely rubbing the aforesaid Lips and every Superexcrecence with the Vitriol-stone, I kept the *Cranium* dry, and disposed it to exfoliate. After the discharge of Matter ceased from within the *Cranium*, I left the Exfoliation and incarning of it to my Servants, visiting the Patient but seldom my self. His Wound was cicatrized in less than two months: as indeed they all usually are, if they be treated as they ought. But if they fall into such ignorant and obstinate hands, who suffer the *Cranium* to be overgrown with loose Flesh, a great discharge of Matter will follow, and the *Cranium* must of necessity corrupt, and consequently the Cure must be prolonged.

During the Wars I was frequently imployed in the dressing some one person or other, wherein I have seen all or most of the several sorts of Fractures mentioned in this Chapter. Particularly at the Battle at *Worcester*, a Sol-

18. Obser-
vat. of a
Soldier
wounded
in the
Head.

dier came to us where we were dressing, with his Sword in his hand, the Blade broken off near the Hilt, with many Wounds on his Head. I seeing the Hairy scalp of one side of his Head hanging down his Neck, went to him, and calling my Friend *Will. Clarke* to me with a Sponge to cleanse the Wound, we saw six pieces of the Scull sticking on it: some of them were of the first Table, others of both Tables. Besides which there were various Fissures, *Sedes*, and some Fractures, with Depression, made by Sword, Musket-stock, &c. We freed the scalp of those Bones, and returned it upward so far as we judged it necessary; then cutting off what was superfluous, tacked it to the sound parts by several Stiches distant from one another, leaving a space to dress the Depression and greater Fractures. Then we dressed up the Wounds with Digestives *ex terebinth.* &c. and where the *Dura mater* lay bare, we applied Pledgits dipt in *ol. ros.* and to the other parts of the *Cranium* liniment. *Arcei.* The Alarm growing hot of the Enemies entring the City, I left *Will. Clarke* to bind it up, and made my way out of the Town. But this young Chirurgeon, being taken busied in dressing the wounded Soldiers, had liberty, after the heat of the Fight was over, to imploy his Charity in dressing some of them, and writ me since this Souldier's particular Case: *viz.* The third day he found him pretty hearty, and his Wounds mattering so very much, that he was necessitated to cut loose two of the Stiches, to give vent to it: then he dressed the penetrating Wounds with *mel. ros.* and the *Cranium* with Lint pressed out of *spir. vini*; and proceeding accordingly in the Cure, saw the depressed and mangled Bones cast off, incarn, and cicatrize with the rest. The Soldier being thus cured by him, made a Voyage to the *Indies*, and since hath served a Soldier in the Tower of *London*.

An Additional Discourse of Wounds of the B R A I N.

Uncertainty of
Symptoms
in wounds
of the
Brain.

THE greater Symptoms that are usually said to attend the Wounds of the Brain do shew themselves more uncertainly than a speculative Chirurgeon would imagine; and in Cuts and Wounds made by sharp Weapons, or sudden strong force, more uncertainly than in Contusions, Concussions, and Depressions of the Scull, the highest of them, *viz.* Vomiting, Stupour, Loss of speech, with a *Paralysis* of Legs and Arms, arising more suddenly in these latter cases than in the former. These Symptoms have appeared in one of the forementioned Observations, where there was nothing of Fissure or extravasated blood seen upon the *Dura mater* after the terebration or perforation of the *Cranium*. Nay, we see many die suddenly from a Box on the Ear, and from small Blows or Wounds. In some whereof, upon opening the *Cranium*, there hath been much blood extravasated: in others none at all, or ought else that may be thought to have killed the Patient.

Observat.

A Young man by reason of a Blow with a Cudgel upon the Forehead presently took his Bed, and became delirious: a *Sopor* followed, and after some days he died. I was fetcht to see his Head opened. In opening his Forehead, I saw a small Hair like a Fissure running from the great *Canthus* of the Eye upward. We took off the Scull and *Dura mater*, and found but little blood extravasated, the *Pia mater* as little altered.

Others I have been called to see opened, where there had preceded only a Contusion of the *Calvaria*, without any Fissure, or more extravasated blood than is usually seen in every opening or taking off the *Cranium*: yet the Patient lay,

lay, as I am informed, under all those Symptoms of *Delirium*, *Coma*, &c. Then again I have drest many that have been cut through the Skull, the Shivers of Bones lying pasht with the Flesh and Hair upon the *Dura mater*; yet the Patient hath been without any Symptom of such a Wound; which I suppose happened by reason of the Bones lying loose upon the Membrane.

At *Sterling* Mr. *John Chace* was present when a poor Servant-maid came to me to be drest of a Wound she had received on her Head by a Musket-shot, in the taking of *Calender-House* by the Enemy. There was a Fracture with a Depression of the Skull. I set on a Trepan for the elevation of the depressed Bone, and for discharge of the *Sanies*. She had laboured under this Fracture at least a week before she came to me, yet had none of those Symptoms aforementioned. But after Perforation, and raising up this depressed Bone, and dressing her Wound, she went her way, and came daily thither to be drest, as if it had been only a simple Wound of the Hairy scalp. Mr. *Penycuke*, an eminent Chirurgeon of that Nation, did assist me in this work. I think the Brain it self was wounded. I left her in his hands, who I suppose finished the Cure.

At the beating up of some of our Out-guards near *Truro*, the Enemy pursuing them, a Trooper wounded between the right Brow and Ear, espying me amongst the crowd, importuned me earnestly to dress him, and would admit of no excuse. We stopt at an Apothecary's House on the right hand going out of the Town towards *Perin*. I called to the Apothecary's Servant to bring somewhat to dress him. Mean while I hastily lifted up the bloody Hair, and saw a quantity of the Brain lie among it. I too it up with my fingers, and shewed it him: the sight whereof so calmed his passion, that I had liberty to fly from the Enemy, who was entered the Town. Here the Prognostick was certain, yet there appeared none of those cruel Symptoms which accompany Concussions or lesser Fissures.

From Battels and Sieges of Towns and Garisons we meet with many such Wounds: in them we hasten our way to the extraction of extraneous Bodies, by cutting off the shattered Hairy skin first, then pulling out whatever was carried within the *Cranium*. If this be well performed, we then dress up the Brain and Membranes with a Sinder of Silk or soft Linen of a bigness proportionable to the Wound, dipping it in a warm Digestive such as is proper for the wounded Membranes. For however Chirurgeons have proposed to dress the Brain with one kind of Medicament, and the Membranes with another; that is not possible to be done: for if the Membranes or *Meninges* should be washt with the same Medicament, and be offended by the Acrimony thereof, Inflammation, Fever and *Delirium* will the speedilier follow. Therefore in the Cure of these Wounds of the Brain, I consider the Brain as an insensible Body, and that the dressing of them consists in keeping it within its Membranes, and treating it as Wounds of the Membranes with Lenients, &c. If this can be done, as in small Wounds of the Brain it doth sometimes happen, (if the Fracture of the Skull hath not been very large,) then the Patient may recover.

But if the Fracture in the Skull be large, and the Wound in the Brain proportionable, so that the Brain cannot be retained within there, then it corrupts by reason of the external cold, and offends the Membranes by its putrid Acrimony, and is frequently the cause of all the ill Accidents that attend them. The Patient sometimes lives until that Lobe be consumed, or hath wrought it self forth; as for Instance:

A Few days before the Battle at *Worcester*, while we were dressing the wounded Soldiers, one was brought to us shot with a Musket-bullet on

D d d

1. Observ
of a fra-
cture of
the Crani-
um by
Musket-
shot.

the right side of his Head. My Servant *Will. Clarke*, now dwelling at *Bridge-north*, in dressing his Wound felt the Shot sticking deep in the Skull. I hastened to him, and saw the man speechless. We laid the *Cranium* bare by a circular Incision, and permitted it to bleed a while; then cleansed it with a Sponge prest out of Vinegar, and fill'd it up with dry Lint. After an hour or two, the Bleeding being stopt, we opened the Wound again, endeavouring to get out the Bullet: but it not yielding thereto, we set on a Trepan close by it in a depending part, and gave vent to a quantity of blood: then passing in a Levator we raised up the Bullet, and pull'd out the depressed Bones, with which there came away some blood and a little of the Brain: This being wiped away, there appeared a large Wound in the *Dura mater*. We dress'd it with a Sindon dipt in *ol. ros. & resina*, and fill'd up the Cavity with Dossils of Lint. Having so likewise dress'd up the trepann'd Bone, we applied our Digestives to the Lips of the Wound, with *emp. à bolo* and Bandage over all. Before we had dress'd him up, he lifted up his Eyes, and asked how he came amongst us. Several other things he demanded of us. We caus'd him afterwards to be removed, and continued our care of him. The Wound did digest, and somewhat of the Brain came away each day; yet his speech continued: but what became of him after our Defeat, I do not know.

2. Observ.
of a fractured
Skull.

At the Siege of *Melcomb-Regis*, a Foot-Soldier of Lieutenant-Colonel *Bal-lard's* by the grazing of a Cannon-shot, had a great part of this Forehead carry'd off, and the Skull fractured into many pieces, and some of it driven with the Hairy scalp into the Brain. The man fell down as dead, but after a while moved; and an hour or two after, his Fellow-Soldier seeing him endeavour to rise, fetcht me to him. I pulled out the pieces of Bones and lacerated Flesh from amongst the Brain, in which they were intangled, and dress'd him up with soft folded Linen dipt in a Cephalick Balsam, and with Emplaster and Bandage bound him up, supposing I should never dress him any more. Yet he lived 17 days; and the 15 day walkt from that great Corner-Fort over-against *Port-land* to the Bridge which separates *Weymouth* from *Melcomb-Regis*, only led by the hand of some one of his Fellow-Soldiers. The second day after he fell into a *Spasmus*, and died, howling like a Dog; as most of those do who have been so wounded. About the same time a Maid-servant was shot into the right side of her head by a Musket-bullet deep into the Brain. She lived so long till that Lobe of the Brain wrought out or corrupted.

3. Observ.
of a fractured
Face,
Nose, &c.

At the Siege of *Taunton* one of Colonel *John Arundel's* men, in storming the Works, was shot in the Face by Case-shot. He fell down, and in the Retreat was carried off among the dead, and laid into an empty house by the way until the next day: when in the morning early, the Colonel marching by that house heard a knocking within against the Door. Some of the Officers desiring to know what it was, lookt in, and saw this man standing by the Door without Eye, Face, Nose, or Mouth. The Col. sent to me my Quarters being nearest) to dress the man. I went, but was somewhat troubled where to begin. The Door consisted of two Hatches; the uppermost was open, and the man stood leaning upon the other part of the Door which was shut. His Face, with his Eyes, Nose, Mouth, and forepart of the Jaws, with the Chin, was shot away, and the remaining parts of them driven in. One part of the Jaw hung down by his Throat, and the other part pass'd into it. I saw the Brain working out underneath the lacerated Scalp on both sides between his Ears and Brows. I could not see any advantage he could have by my Dressing. To have cut away the lacerated Part here had been to expose the Brain to the Air. But I helpt him to clear his Throat, where was remaining the Root of his Tongue. He seem'd to approve of my Endeavours, and implored my help by

by the Signs he made with his Hands. I askt him if he would drink, making a Sign by the holding up a Finger. He presently did the like, and immediately after held up both his Hands, expressing his Thirst. A Soldier fetcht some Milk, and brought a little wooden Dish to pour some of it down his Throat: but part of it running on both sides, he reacht out his hands to take the Dish. They gave it him full of Milk. He held the Root of his Tongue down with the one Hand, and with the other poured it down his Throat, (carrying his Head backward,) and so got down more than a quart. After that I bound his Wounds up. The dead were removed from thence to their Graves, and fresh Straw was fetcht for him to lie upon, with an old Blanket to cover him. It was in the Summer. There we left that deplorable creature to lodge, and while we continued there, which was about 6 or 7 days, he was drest by some of the Chirurgeons with a Fomentation made of Vulnerary Plants, with a little Brandy-wine in it, and with Stupes of Tow dipt in our common Digestive. So we bound him up.

I could tell you of many more wounded into the Brain, but I think these may serve to prove what I would demonstrate, viz. that the Brain is of it self insensible; that those Symptoms which accompany these Wounds proceed from the pain which the *Meninges*, *Dura* and *Pia mater* suffer, which if oppressed by extravasated blood, or a Depression of the Scull, do quickly suffer the greatest Symptoms, as Vomiting, *Stupor*, *Paralysis*, &c. much more if they be pricked by any Speel of a Bone, or other extraneous sharp body. When the Brain it self ouzeth out between them in the manner already mentioned, it is a mild soft substance and lenient to them, so that the Accidents appear not till that begins to corrupt between them and with it the Membranes themselves putrefie; upon which there follow Convulsions, Howlings, and a dispatch of the Patient. From which very Observation may be seen the folly of dressing these Wounds with powerful Desiccatives, which, so far as I could observe, did always hurt the Membranes, but never either digest or incarn the Brain. For, according to *Hippocrates*, *non coalescet*, but as it gets liberty works it self forth not unlike unto Barm. At Sea those wounded into the Brain die soon after, we having no conveniency of lodging them or dressing them so warm as they require. In the Wars my imployment did not permit me to see the finishing of the Cures; and here, in my practice in and about the City, I never was called unto any so wounded where there were any hopes of Cure; therefore must leave that to others to treat of. But by what I have seen of them heretofore, their Cure consists, as I have already said, in dressing them as the Wounds of the *Dura mater*, and in keeping the Brain within its Membranes; without which no Incarnation can be made on the Membranes.

TREATISE OF Gun-shot Wounds.

The Sixth Book.

CHAP. I.

Of Gun-shot Wounds in General.

Gun-shot
Wounds
whether
fiery or ve-
nomous.

GREAT hath been the contention amongst the Learned about Fire and Venom in Gun-shot Wounds, some maintaining the one to be in them, some the other; and others holding that there is neither. That which I suppose might be the occasion of their suspecting a burning and a poisonous quality, was the deadly Colour of these Wounds, which in those early days, when the invention of Guns was novel, surprized them, they looking not unlike poisoned and burnt Wounds: Where the Bullet pierceth, it extinguisheth the natural heat, and the Lips of the Wound are livid or blackish; and if they be not drest rationally, they inflame, and are accompanied with Tumour, and Blisters frequently rise about them, also the Matter is of a foetid smell. In this condition the Wound is commonly the first day, and so to the seventh; and, if not succoured, it gangrenes, and so the Patient commonly dies. If in those days the Learned were thus deceived by their aspect, and drest them as venomous Wounds; it can be no marvel that they should write so of them; I verily believing, that in their way of treating them they were directly as poisoned Wounds difficult to digest and cure.

Errors in
dressing
Gun-shot
Wounds.

In these our later times, although they do not call them venomous, yet is it a difficult thing to dissuade many of our Chirurgeons from dressing these Wounds with Tinctures of Myrrh and Honey of Roses, and thrusting in of great Tents: by which way of dressing I have seen these Wounds undigested the tenth day; one whereof was in the Cheek with dry and flaggy Lips. These lesser fleshy Wounds being undigested, at last gangrene: and in truth it is not to be wondered at; I will undertake to shew you the Experiment every day, and that in a Fontanel or Issue made by a Caustick. Cut you through this livid or black Eschar, and put in a Pea in the middle of it, with Tincture of Myrrh and Honey of Roses, as I have seen some of them dress Gun-shot Wounds, and the next 2 or 3 days after, when you dress it again, it will be to your sight not unlike a Gun-shot Wound: continue your dressing with a Pea, and with your Tincture of Myrrh; and if it do not gangrene, yet it will be inflamed, and slow in Digestion. And this is from the improper Application in the dressing it. For if you dressed this Eschar in the Fontanel with Emollients and Digestives, as you ought to do, the Eschar would separate with Digestion in the worst Habit of Body: and so it will in Gun-shot Wounds with

little

little distemper or difficulty, if you have timely extracted the extraneous Bodies. But the ignorance in some, and the discountenance of others in this kind of Chirurgery, hath occasioned these Errours.

Thus at our entring into *Worcester*, when the King came out of *Scotland* with an Army of that valiant People, a Townsman was shot. The Pistol being fired by the Cheek, shot him thro' his lower Jaw and Tongue, and out at the contrary Cheek. The Chirurgeon of the Town, upon sight of it, concluded it gangrened from the black colour, and declined the dressing it the way he rationally ought: upon which the Part grew exceeding painful, swelled and inflamed; it also gleeted much. After 2 days I was consulted, and by lenient Medicaments, and good Bandage keeping up the fractured Jaw, I asswaged the Pain, and digested the Wound, leaving it in the same Chirurgeon's hands, who cured it. In this person the wound was burnt by the flame, the very Powder sticking in some parts of his Cheek. This, with the Putrefaction occasioned by the hot weather, and the improper Applications contributed to our Brother Chirurgeon's apprehension. It is this ugly aspect that puts the inconsiderate Chirurgeon out of his method, and so renders Gun-shot more difficult of Cure than otherwise it would be. For if such Wounds were rationally drest, they would digest and heal as easily as any complicated Wound. What I have said of Gun-shot, happeneth at Sea frequently by Splinter, which though it may have lost its force to make a Wound, yet it sometimes bruise the Skin to the Flesh so forcibly as to extinguish the natural heat, and to make it black: If this be drest as a Gangrene with *spir. vini* and *unguent. Ægyptiac.* or lapt up with a warm Stupe, the Eschar will grow dry and parcht, and the Humours which flow plentifully to it will cause an Inflammation with Tumour, and an Apostemation is the best that can be expected underneath the Eschar, and consequently it will terminate in a hollow Ulcer; but for the most part it corrupts and gangrenes. Whereas if this contused Eschar were dressed with Lenients according to that Aphorism of *Hippocrates*, *Omne quod contusum*, &c. and the Parts about embrocated with *ol. ros. cum album. ovor. & aceto*, and a Defensative applied over all to prevent Defluxion, the Eschar would separate as easily as those made in Fontanels by Caustick, and afterward incarn and cicatrize with much ease to the Patient.

Observat.

Many Instances I could give of this kind, but shall make choice of one that will give least offence, and that in the outside of the Leg. It was somewhat broader than a Five shilling piece in Silver. How it hath been dressed on Ship-board I will not insist; but on the Shoar I saw it black, and the Pretender to Chirurgery had dressed it with *spir. vini & unguent. Ægyptiac.* &c. till it was as hard as Shooe-leather, and the circumjacent Parts inflamed and swelled. I did not perceive he had ever cut into the Eschar: if he had, it was superficially done. I advised it to be presently divided, and to be dressed warm with *unguent. basilic. cum ol. lilior.* But he replied, he knew how to dress a Gangrene. It was no easie task to perswade him out of this method: but I prevailed, and thereby the Matter was discharged, and the Patient more easie, and sooner cured.

Observat.

C H A P. II.

Of the Cure of Gun-shot Wounds; and first of Extraction of Bullets, &c.

WOUNDS made by Gun-shot are the most complicate sort of Wounds that can be inflicted: For they are not only Solution of continuity but have joined with them Contusion, Attrition, and Dilaceration, in a high and

Compound intentions.

and vehement kind. To this we may add all sorts of Fractures and Accidents, as *Hæmorrhagia*, Inflammation, *Erysipelas*, Gangrene, and *Sphacelus*; besides the extraneous bodies which are violently carried into the Wound, and multiply Indications. The number of the Indications in compound Affections must answer to the variety of Disturbances. Were it a Simple wound, the Cure of it would presently be performed (as you have read in the preceding Treatise of Simple Wounds) *per astringentia & exsiccantia*, by such Medicaments as are of an astringent and drying quality. The Cure of a wound is the Exsiccation of it. But here is always joined with these that which indicateth the use of *emollientia & suppurantia*; according to that of *Hippocrates*. *Omne quod contusum, necesse est ut putrescat, & in pus vertatur*, What is contused must necessarily putrefie, and be turned into Matter.

What is torn is to be reduced to the part, or cut off.

Hæmorrhagia.

That which is fretted and torn must also be reduced to the whole, or cut off, before your ordinary intention of Incarnating. Moreover, in these Wounds, not only the Bullet it self is ordinarily lodged, but many times other strange bodies are carried along with it; for Extraction of which, judicious care and industry are required in you. In these recent Wounds we very rarely have a Flux of blood. Though the Veins and Arteries be wounded, and commonly lie quassht in the contused Flesh, until separation of the Eschar; and about that time, when you least think on it, they may burst out violently. I have seen them thus often break forth. But if such Vessels do bleed upon the receipt of the wound, and interrupt you in drawing out the extraneous bodies, you must endeavour to suppress the Bleeding, for thereupon depends the life of your Patient: But withal so proceed, that you may extract the Bullet first; and then be careful, that in the restraining the Bleeding you bring not on a Mortification by your crowding in Dressings. Too many Instances may be given hereof: Therefore I rather advise you to use an actual Cautery.

Observat.

A great *Hæmorrhagia* happening to a Soldier at the Surprize of *Weymouth* by the Garrison of *Portland*, by a shot through the Heel, I endeavoured the stopping of blood by Astringents, Bandage, &c. But after all, I was put to the use of the actual Cautery; which I did apply successfully, and have since seen *Botallus's* Authority for it. *Tutius enim est (saith he) eam ignito ferro constringere.* These Wounds are also accompanied with Pain, which ought

Anodynes

to be appeased by Anodynes. But you must be well advised in the Application, lest you extinguish that small remainder of heat that is left. How you shall deal with all these Inconveniences, and not add one evil to another, I shall plainly deliver to you. And first, what must be first put in execution; which is, the Extraction of Bullets and other extraneous bodies.

Dress presently during the heat of Battel.

The Part is at first dressing to be cleared with what diligence you can of all such foreign bodies as have made violent intrusion into it, while the Patient is warm with the heat of Battle, and the Wound fresh, and very little altered by either Air or Accidents: Upon which consideration less Pain must necessarily follow upon the Extraction.

Necessity of it.

In the Armado Naval of *Dunkirk*, where the Chirurgeons were oft employed in this kind of work, we after every Fight went together visiting one anothers wounded men. It was thought amongst us a great shame, if any thing of this work of Extraction were then to be done: For after the first and second day the Wound proveth tumefied, also the neighbouring parts are inflamed, and so changed in their temper, that they conceal from your sight both the Bullet and his Companions, so that the place they are caught in can hardly be known; or, being discovered, you cannot without hazard of your Patient, or great trouble of the Part, make Extraction of them. In which case it may then be reasonable to defer that work, and by Lenients to hasten Digestion.

Yet

Yet if the Wound be near a Joynt, or the Shot lodged amongst the Tendons, it's much to be feared the Pain will not cease, and consequently the Wound will not digest. In which case the omission of drawing out the Bullet may bring a Mortification. It hath been the cause of the death of many a brave Soldier, and is the ground of all the mischiefs these Wounds are subject to, as Pain, Inflammation, Spasm, Convulsion, Gangrene, *Sphecclus*; what not? every Battle producing Instances of it, to the discredit of our Profession. Therefore to prevent the increase of such Accidents, neglect not to make Extraction of it one way or other.

But if the Bullet be lodged in a less noble Part, as in the Musculous flesh, you may with more safety content your self until the seventh day, or till the fierceness of the Accidents be over, and the Wound digested. But withal it will require more care, for the Wound will be more Painful, and slow in Digestion, than otherwise it would be. Yet by the confession of those that allow Fire and Poison in it, the Bullet may lie long there, and do little harm. Nay, I suppose there are not many but have heard of or seen Bullets, that, without grievance to the Patient, have continued lying long in the Fleishy parts of wounded men. Conceive this spoken of Leaden Bullets; for Iron or Brass cannot (by reason of their aptness to rust) remain without doing harm. However, let nothing of this encourage you; for the Bullet pierceth not any Part without carrying Rags along with it, which corrupt in the Wound, and make Apostemations, occasioning a prolonging the Cure; as must needs be observed by all men in their practice.

The Servant of a Nobleman was wounded and shot in the Thigh by High-observat way-men. The Bullet not having been extracted by his Country-Chirurgion at the first Dressing, could not be drawn out by me at the second, but occasioned great Pain and Inflammation, burning Heat and Watchings. And although he had many other considerable Wounds upon him to make a Derivation, yet was his Gun-shot more vexations than all the rest, until I extracted the Bullet, and Rags carried in with it: Yet this was but a Pistol-bullet. But after I had drawn it out, my Digestion became good: and by equal Bandage, with gentle Compression of the Parts, I united and healed it in 10 or 12 days, which I doubt would not have been cured in three months.

Nay, while any of the Rags remain in the Wound, it will never cure: But the extraneous bodies drawn out, there is little difficulty in the healing these Simple Wounds if drest rationally.

An Instance whereof I shall give you in a poor Soldier, who was shot at Observat the Castle of *Dunbar* with a Musket-bullet a little above the left Clavicle, in amongst the Muscles of that *Scapula*. The Bullet was drawn out by one of my Servants, and the Wound drest up with Digestives. But some days after, he being brought to *Saint-Johnston*, I found it inflamed and very much swelled. We dressed it up according to the method set down in this Treatise: but it apostemated, and mattered very much. After several unsuccessful Applications, I made an Incision by the side of the *Scapula* into the Cavity, and pulled out the Rags that had been carryed in by the Shot: And from that time all Accidents ceased, and the Wound cured soon after. But if such be handled as some have lately taught, they are as so many poisoned Gun-shot Wounds.

Now for the taking out of the Bullets, and other extraneous bodies, there are two methods. First, one to extract them by the way they went in: The Two methods of extracting Bullets. other, to open the way by which they would, if their force had not failed them, have passed themselves through.

For to take them out the way they were forced in, you must place the Patient as near as may be guessed in the posture he was in when shot: And if, First, the Bullet by went in.

Methods
of search.

by reason of his weakness or other infirmity, he cannot without prejudice be so situated, let him be laid in a Position which may as nearly answer it as may be, lest some part of a Muscle, Tendon or Ligament obscure what you desire to make manifest: Then make a search for them with your Finger or Probe. The figure of these Wounds is always round: The Bullet forces the Flesh in with it, and the place by which it enters presently contracts closer; but its going out is more lax. You may guess by view of the Wound the largeness of the Bullet; and comparing the one with the other, make choice of a fit Instrument for Extraction, wherewith you ought always to be well furnished. Your main care in this work must be to find out the Bullet: But if you fail of it by searching into the Wound with your Probe, then try if you can feel it by handling the Parts about: It being wonderful to consider how these Shots do twirl about, at least seem to do so, when the Posture is changed in which the Wound was received.

As for example, a man hath been shot in the Cheek, and I have cut out the Bullet behind in his Neck. Another was shot in the outside of the small of one of his Legs; the whole Member extremely swelled and inflamed; no possibility of finding out the Bullet either way: At last by chance I felt it in the inside of the Thigh above the Knee. And so another being wounded in the outside of the Arm, I have cut out the Bullet below the *Scapula*. If the Bullet hath not lain in so long (as in some of these Cases) that the Parts are extremely pained with Inflammation and Tumour, the Pain where the Bullet lodges doth sometimes help to discover it.

Observat.

A common Soldier, shot in the Breast through the *Sternum*, lay roaring very grievously, complaining of a Pain in his Back. I was fetcht to him, and turning him on his Side, I saw the Bullet lie like a small Wen or *Scrophula* thrusting out under the Skin not far from the Spine. I made Incision over it according to the length of the Part, and thrust out the Bullet as easily as I could desire. Then I dressed it with Digestives, the Soldier ceased his crying, and acknowledged before us his Pain was from the Bullet in the Skin. For indeed the Lungs and other internal Parts are seldom so sensible of Pain, though wounded through.

Observat.

An Instance whereof I saw in one run through them with a Rapier. He complained of no other pain than that external one in his Back where the Sword passed out. Sometime after this being cured, he died of another Distase. I opened him, and saw his Lungs found, and that the Pain of his Back proceeded from the edge of the Rib, which had been cut by the Swords passing out. The Lungs discover their hurt by other Symptoms. The common Soldier died, as most do that are shot through the Lungs.

If in your searching for the Bullet you light on the Part, though there be no Extubérance or ought to be felt, yet his Pain there will be a good sign of it. If no Accidents occasioned that Pain, make your way there by Incision, avoiding the Vessels, and take out the Shot, and what else offers it self. By this you do both quit the Part of its troublesome Lodger, and withal make way commodiously for discharge of Matter; which, in regard most of these Wounds are sinuous, (the Bullet turning aside when it is hindered in its journey forward,) for want of discharge, might in those places occasion *Fistula's* and hollow Ulcers, not without ill quality.

Observat.

So a man being shot with a Slug near the external *Canthus* of the right Eye through that Bone, it seemed to the Chirurgeon that drest it to have passed directly forwards, and accordingly he crowded in a Tent, and daily increased the bulk, to stop the Bleeding it was subject to. But the Bleeding continuing, I was fetcht, and saw him pull out a Tent above an inch and an half long.

long. I cast in some of the Royal Stiptick-water, and stopt the Flux of Blood. His Cheek was very much swelled, and had apostemated on that side of his Neck, and discharged its Matter two inches lower than the Tumour. I cut afterwards into that Tumour, and felt the Slug: It lay partly under the *Os jugale* or Cheek-bone. It was a wonder to me how it came there; but I drew it out: And from that time his Wound above and the Apostemations below cured.

In the work of Extraction, take great care you lay not hold of some Nerve or Tendon, and so pluck them along with the Bullet: For by so doing you will cause intolerable Pain and grievous Accidents. You must therefore neither open nor dilate your Instrument, until you take hold of the Bullet without any of the circumjacent Parts. Caution.

C H A P. III.

Of Dressing Gun shot Wounds after Extraction.

AS soon as you have made a Separation of these extraneous bodies, if you judge the Wound to be so well conditioned, that there is neither Puncture, nor any thing tending that way, (as in recent Wounds there is not,) First dressing after Extraction. be not discouraged at whatsoever evil aspect it then hath, but consider its livid colour (as I have said) to be usual in these Wounds, where the Contusion is not only simple in the Skin, but through Flesh and all, as far as the Bullet or Splinter went, extinguishing the natural Heat: So no wonder if it hath the colour of a gangrened or poisoned Wound. Therefore be not disturb'd in your thoughts, but, having taken out the Bullet or pieces of Splinters, dress it up as a contused Wound with *Oleum Catellor.* or such as followeth, as hot as the Part will bear, not giving credit to any that shall persuade you to the contrary, no, tho' it be near a Bone; for the Gleet will foul it more than your greazy Medicaments; therefore dress it with some of these: *R. ol. lilior. alb. ℥vj.* boil in this two new-whelp'd Puppies until the Flesh fall from the Bone, then add *lumbric. terrestr. in vino lotor. ℥j.* boil these a while, then strain them by a gentle Compression: To the strained Liquor add *terebinth. ℥ij. spir. vini ℥j.* reserve this for your Use. Or this: *R. ol. lini, cannabin. an. ℥iv. ol. lilior. chamemel. an. ℥ij. terebinth. ℥j. Misc.* Or this: *R. terebinth. opt. ℥iv. thuris, mastich. an. ℥ij. myrrhæ ℥j. ol. Aparici ℥ij. ol. lumbric. & sambuc. an. ℥ij. Misc. S. A. R. ol. oliv. ℥j. terebinth. ℥℥. gum elemi. ℥ij. æruginis pulv. ℥ij.* Or this: *R. spir. vini ℥℥. terebinth. ℥j. ol. hyperici & lini an. ℥℥. sang. dracon. subtil. pulv. ℥j. Misc. S. A.* See ol. Aparici, in Simple Wounds.

With this latter I cured a Servant of A. D. shot into his Hand. This digested the Wound; and after the Slough began to separate, I felt part of a Bone bare, which I dress'd with *extract. scord.* dissolved in *mel. ros.* with which I deterged; and feeling the Bone afterward incarned, I also incarned the Wound, and cicatrized it with *unguent. tutie*, &c. and in few days cured it without any difficulty. *Liniment. Arcei* with any of the above-mentioned Oils is very good, adding a few drops of *ol. terebinth.* which by its subtility penetrates, and by its heat rouzeth the natural heat in those cold Parts, and putteth them upon Digestion and Separation. Observat.

Quercetan commends this: *R. succorum tussilag. oxalidis, an. ℥ij. caricas ping. num. xx. thur. ℥ij. resin. latic. ℥ij. axung. gall. anser. an. ℥ij. butyri recent. ℥℥. ol. visci pomorum comp. ℥j.* put these all together in a vessel close stopt, boil

them on a moderate fire the Space of six hours, then strain them out hot, and evaporate them to a good consistence. This following is another of his: *R cere novæ, resin. picis naval. an. ʒiv. sevi hircin. medullæ cruris vitulini, an. ʒij. æsspi ʒj. ol. oliv. aut lini lbj. liquefactis omnibus & transcolatis fiat Unguentum, quod reservetur ad usum.* He adds ʒj. of Precipitate to every ʒj. of this. But in recent Wounds this will not be necessary: For you will find by experience, that these Wounds will digest and suppurate without it, (and that frees them from Putrefaction) nor will it be always for your credit, if you consider the quantity of Balsams we use in such Wounds, and what prejudice some people may receive either by its Salivating them, or otherwise affecting their Spirits. Yet Precipitate and *axungia* with a few drops of *ol. terebinth.* was a common Medicament amongst us: But I refer that to you, it being a good Remedy to resist Putrefaction, and hasten separation of the Escars. You ought to dress up these Wounds lightly with a proportionable soft Tent, and Pledgits dipt in some of the Digestives very warm, but not to scald them. After that embrocate the Parts about with such like: *R ol. lumbric. ros. myrt. an. ʒiiij. aceti cochl. ij.* mix them. In the dressing, your Applications over the Wound and Parts circumjacent should be such as have a vertue to hinder the Flux of Humours and strengthen the Parts: To which purpose, *R far. bord. & fabar. an. ʒvj. ros. rubr. bacc. myrt. an. ʒjß. sem. cydon. ʒvj.* boil these in *posca* to the consistence, of a Cataplasm, adding at last two new-laid Eggs, with *oxymel ʒijß.* If you apprehend this too heavy, you may add *ol. myrtal. & ros.* with Wax as much as is necessary, and make it into the form of a Cerote. Above the Wound lay one of the following Defensatives, which you may have always ready by you. *R bol. Armen. ʒiv. terræ sigil. ʒiiij. sang. dracon. ʒjß. corn. cerv. nst. or burnt Bones ʒiiijß. or Juice or Sloes dried ʒiiij. ol. ros. & myrtill. an. ʒvj. aceti ʒxij.* boil these to the consistence of a Cerote, *addendo in fine decoct. alb. ovor. iv.* Or this: *R pulv. ros. rubr. myrt. ʒj. bol. Armen. terr. sigill. an. ʒvj. succ. plantag. solani, an. ʒij. aceti opt. ʒiv. ol. ros. & myrt. an. ʒvj. cere q. s. Misc.* Apply your Compress dipt in *aceto* or *Oxycrate*; Let your Bandage be put on equally and gently, to retain your Dressings, and hinder the Influx of Humours.

Bleeding. Having thus dress'd the Patient, presently consider of letting him Blood, to prevent ill Accidents, and especially if he lost little or no Blood from the Wound, or if there be a *Plethora* joined with it. In which case Revulsion made from the same side is commended by *Galen. Revulsio enim quæ è directo fit celerrimam utilitatem adfert: Galen. de Sang. missione.*

Clysters. A Clyster should preceed Phlebotomy. It may be made of the common Decoctions: or of Mallows, Violets, Beets, Mercury, Bay and Juniper-berries, with Oil of Linseed, Honey of Roses, *hiera picra*, *Elect. lenitiv.* &c. But if you have not these in readiness; make your Clyster with the Broth of Flesh, *ol. chamemel.* Sugar, and the Yolk of an Egg, with a little Salt, if your Broth be not salt, or, in case of necessity salt Water; or Broth out of the Kettle, with a few Flowers of Camomil boiled in it, and strained, adding a little Butter, or Oil, and red Sugar. Any such like may serve for a good Clyster.

Epithemata. It will also be requisite you be furnished with some Cordials, to resist the putrid Vapours, and refresh the Spirits; which you may do externally by some *Epithemata* of distilled Waters, as of Balm, Bugloss, Roses, *acutum*, with the Powder of the Roots of *tormentill. scordium, scorzonera, contrayerva*, or other Cordial Species, of which you have variety in the *Pharmacopœia Londinensis*, which may be for your purpose. This following may serve for an Example: *R aq. melisse, borrag. bugloss. an. ʒij. aceti rosati ʒj. speciei diarrhod. ʒj. croci ʒj. Misc. fiat Epithema.*

And

And with some of the aforesaid Waters you may make Cordials also, by adding Syrup of Citrons, Gilliflowers, and *confect. Alkermes*. For instance, *R aq. bugloss. cinnamon. an. ℥ij. conf. Alkermes ℥j. lap. bezoar. occid. ℥ss. syr. è succ. citri cochl. ij. Misc.* For the common Soldier *℥j. of London-treacle or Mithridate* dissolved in Wine may serve. As to their manner of Diet, in great Wounds it is necessary to observe a spare one, as Barly-gruels, Panadoes, Thin-broth, or a Potched Egg, this much availing to the preventing of Inflammation. But in this the Patient's custom must be considered. Also the Air ought to be temperate, for Cold is an Enemy to wounds. Rest is likewise required, as well to the Mind as the Body. Therefore having dress'd him, lay him to rest with *℥vj. syr. de meconio cum cochl. ij. aq. cardiaca in ℥iij. aq. papaver.*

Cordials.

Diet.

We shall now procede to the second days work, and therein consider the Habit of Body, and more particularly what concerns the wound. In these Gun-shot Wounds it may be convenient the Body be gently purged by Lenients, as is formerly said. *Purgatio enim per alvum plerisque vulneribus prodest.* Purging avails much for the carrying off bilious and serous Humours, which from their heat and tenacity are most apt to ferment and flow into these wounds, and cause Pain, Inflammation and other ill Symptoms. In which cases *cassia, manna, tamarind. syr. de cichor. cum. rhabarb. ros. solut.* are prescribed, and may be taken in Whey or Ptisans.

The second days dressing.

But as for stronger Purgatives, *Hippocrates* saith well, *Cocta sunt purganda, non cruda*: Which is more especially true when you speak of Scammoniate Medicines.

Purging.

Having thus proposed a general way of Purging, we shall again consider what is requisite for Dressing the wound, and prepare our Dressings, and apply such Medicaments as may be necessary. In order to which you ought to have a Fomentation ready, whereout may be wrung a hot Stupe. To which purpose, *R summitat. hyperici, centaur. scordii, absinth. an. Mj. flor. ros. rubr. chamemel. melilot. sambuci, ana Mjss. fursuris Pj. coq. in aq. font. ad ℥ijss. colat.* *adde vini austeri ℥j. spir. vini ℥vj. fiat Fotus.* These will give a breathing to the Parts, and defend the wound from the Air while you consider it. If all be well, continue the use of Digestives. But if it be accompanied with very great Pain, you may foment this: *R decoct. rad. althææ, malvar. fol. verbas. chamemel. melilot. sem. lini, fenugrac.* boiled in Sheeps-head-broth, or other: And of the feces of this Fomentation you may make a Cataplasm, adding *farin. bord. ℥ss. sem. lini, cydonior. pulv. ana ℥j. unguent. basil. & unguent. dialthææ ana ℥jss. axung. porcina vet. q. s. croci ℥j. in sine coctionis addend. ovorum integ. recent. num. iv.* Apply it over all, or the former Cataplasm. It cherishes the heat of the part, furthers Suppuration, and is Anodyne. You are to make the Bandage as before, and continue this way of Dressing to the seventh or ninth day, until you have separated the Sloughs, digested the wound, and have a laudable Pus, (as you are wont to call it,) which is *album, æquale, leve, & minime fetidum*, a perfect white Matter, of good consistence, and not foetid or ill scented. If the Matter be defective of any of the said Qualities, *Præcipitate* will be of good use mixt with the latter Unguent of *Quercetan's*, or that mixt with *Unguent. Apostolor.* or this following Unguent may be applied alone, or with *Præcipitate*: *R succ. agrimon. centaur. min. plantag. apii ana ℥j. mucilag. bord. ℥iv. boil these together, adding terebinth. Venet. ℥iij. mell. com. ℥ij. far. bord. cribrat. ℥iij. croci pulv. ℥j. fiat Mundificativum.* To this you may add Aloes, Myrrh, *sarcocol. rad. aristoloch. gentian. ireos*, for the incarning these Wounds. If you desire rather Injection, the same Ingredients may serve. But in the use of Injections be sure you do not stop the Orifice to keep the Liquor in; for so you shall distend the Ulcer and make it more Sinuous.

Fomentation.

CHAP. IV.

Of Accidents befalling Gun-shot Wounds, and of Sinuous Ulcers.

BUT from the first to the eleventh day many Accidents are wont to happen to these Wounds, which not only impede the Cure, but often, without timely help, destroy the Patient. And these are, vehement Pain, Inflammation, *Erysipelas*, from whence Gangrenes, and *Sphaceli* do frequently happen. These latter take their beginning from Inflammation. Therefore I have elsewhere particularly treated of Inflammation and *Erysipelas*, that you, seeing what it is, may in its beginning prevent its increase. It commonly proceedeth in this case, either from a very ill Habit of body, or from the ill handling of these wounds in the beginning.

Inflammation.

The Remedy is, timely to prevent the Influx of Humours, and evacuate that which already affecteth the wound. The first way is, by Bleeding and Purging; both which are directed you in the first day's work. If you omitted that then, you must perform it now. The second way is, by external applications. If Pain be the cause, you must succour it by Anodynes, which may mitigate and repress the heat of the part; of which you may have your choice in the Chapters of *Phlegmon* and *Erysipelas* in general; and in the first Chapter of the Treatise of Wounds, where we have particularly treated of Pains, and proposed their Relief, &c. viz. in their beginning with Refrigerants and Repellents, and in their State by moderate Calefaction and Discutients, and afterwards by Concoction of the Matter; to which Treatise I refer you.

Gangrene.

The next and most cruel Symptom is Mortification of the Part, which very often attends great Inflammations, and is shrewdly to be suspected when they yield not readily to Discutients or Suppuratives. In these wounds it happens most commonly thro' a Suffocation of the natural Heat of the part, by reason of the great concurrence of Humours, or too refrigerating and repellent Applications in the time of great Inflammations, which have infeebl'd and hindred the transitus of Spirits into the Part. It may be perceived by the Gleet and change of Colour, it beginning to look livid; also by a diminution of the Tumour, &c.

When you see such a change begin, you must presently prepare to withstand a Mortification by Scarification, not only until the blood come about the Lips of the wound, but deep into it through the Escar to the quick, and suffer it to bleed freely, and make the Part sensibly feel, that by such means you may disburthen it of part of what would have choak'd it, and make way for the entrance of the operation of the Medicine. Then foment the part with a good *Lixivium* made of Ashes, to which may be added Salt and Venegar. Or you may boil *scord. absinth. centaur.* and such like, in the aforesaid *Lixivium*. After you have well fomented the place, wash the Scarifications, and dress the wound with *Ægyptiac. cum theriac. Venet.* dissolved in *aceto vini*, adding calcin'd Vitriol, &c. then apply a Cataplasim *ex farin. hord. fabar. orobi, lupinor.* decocted in some of the same *Lixivium*, with an addition of Oxyssel to it. But as to this matter I refer you to the particular Chapter of *Gangrene* and *Sphaceli*, for farther directions therein. The Gangrene stopt, hasten separation of the Escars by Digestives, and then deterge with *mundif. ex apio & Paracels.* &c. and so proceed with Sarcoticks and Epuloticks to finish the Cure.

Hæmorrhagia. Observat.

But in the separating of contused Parts, as I have often told you, great Fluxes of Blood usually break out upon us. Thus in a Patient of mine, wounded by a Shot through the inside of the *Radius*, upon separation of the Escar a great Flux

Flux of Blood happened. While I was stopping the first Orifice, which was nearest the Artery, the blood burst forth of the other. Hereupon I stopt both the Orifices with some astringent Powders, (I suppose that of *Galen's* prescription of Aloes and Hares Furr, I most frequently using those as the best in such cases,) rowling up the wound with a good Compress dipt in a Stiptick Decoction, laying my common Defensative over all, and did not open it till 3 or 4 days after. How such Fluxes of blood are farther to be treated, you may see in the Chapter of an *Aneurisma*.

See Treat.
of Wounds.

Gun-shot Wounds after separation of the Escar are apt to become Sinuuous Ulcers, especially after great Fluxion, and where Bandage cannot be used to preserve the Tone of the Parts, as in the upper part of the Thigh and Hip, &c. These Cavities causing much pain to the Patient, and difficulty and trouble to the Chirurgeon, we shall consider their Cure, taking our Indication from the Parts affected, with the largeness of the wound, Contusion and Laceration of parts: For from such Wounds there must necessarily be loss of Substance, and the quantity or evil quality of the Matter must needs render it Sinuuous, especially where the Bandage cannot be conveniently made to thrust out the Matter.

Sinuuous
Ulcers.

And if the Bullet or any extraneous body be yet remaining within, and the Parts extremely tumefied and troubled with pain and influx of Humours, the included body will be the more streightned in its passage out, and render the Cure so much the more difficult. And if a *Carochymia* or *Lues Ven.* be joined with it, you will scarce cure your Patient without exhibiting Antivenereal and Scorbutick Remedies.

Therefore to prevent Sinuosities, you are to enlarge the Orifice at first, and keep it so wide open, that the Matter which is daily there ingendred may have free passage out: which if it may not by the way the Shot went in, then you must consider how in another place the *Sinus* may discharge it self: This being prudently effected, and the Matter thereby discharged, you shall then more easily perfect your Cure.

But before you make this Apertion, you must consider whether by altering the position of the Part, or by Compression with Bandage, or by hollow Tents, the Matter may not be brought out. And to make the Cure of these Cavities the more facil, you must endeavour to place the Member in such a figure that the Orifice may be depending. Also you must endeavour by Stupes, Sponges, Compress and good Bandage, to press out the Matter, that the Cavities may unite. They should be wrung out of Red-wine wherein have been infused *flor. ros. rubr. myrtill. cort. granat. balauft. nuc. cupress. sumach, acacia*, and if the Matter do not well discharge between the Dressings, you must dress it the oftener. Also Injections may be made with a Decoction of some of these following, *myrrh. aloes, sarcocoll. rad. iridos, aristoloch. spir. vini, mel. ros. aq. calcis, alump.* and such like, to dispose the Sinuosities to heal.

Sometimes in a wound inflicted on the upper part of a Member, the Matter not being likely to discharge it self thereout, I have by a Seton-needle perforated it through; and retaining the twisted Silk in the Ulcer till the lower Orifice was digested, then drawing out the Silk, I kept it open by a Tent a few days, till the upper part agglutinated; and afterward, as the Matter lessened in the depending Orifice, I left off the use of the Tent, and healed it up.

SO in a Gun-shot Wound on the Inside of the Thigh, passing under that *Inguen* slanting up to the *Os Ilion*, and apostemating in the upper Parts, it not yielding to Cure by Injections, Bandage, &c. I made a *Cannula*, through which I passed a Needle with a twisted Silk, and kept in the Silk as a Seton, till I had by Gentian roots dilated the Orifice sufficiently for the discharge of Matter.

r. Observ.
of a wound
in Thigh

Matter. To make the Perforation of the Needle more certain and easie, I applied a Caustick first upon the place, the better to feel the end of the *Cannula*. By this Apertion the Matter discharged it self in what position soever he lay, and he was thereby happily cured.

2. Observ.
of a fist
in the
Face.

One was shot in the Face betwixt the Nose and Eye on the right side into the *Ethmoides* by a Pistol-bullet. After he had been cured some years of the external wound in his Face, he became troubled with a fretting *Ichor*, which discharged by that Nostril; and especially at his first rising in the morning out of Bed it would run half a Spoonful of a yellowish colour, which had made a chop or gutter at the lower end of that Nostril by its acrimony. After some years he felt, upon bending his Head backward or forwards, the Bullet to rowl to and fro over the Roof of his Mouth. He complained to me of his Grievance at the *Hague* in *Holland*, a little before his *Majesty's* going into *Scotland*. I offered to his consideration the casting in Injections, or passing a Probe into that Nostril downwards, to try if either way it might be washt or thrust downwards in the Gullet, or be excreted into his Mouth. But these ways had heretofore proved ineffectual. We therefore resolv'd upon the cutting thro' the Palat-bone. To which purpose I placed him in a clear Light, one holding his Head steady, while I cut into the Roof. But the Flesh was so close tied to the Bone, that it would not yield to my *Spatula* as I expected: wherefore I applied a bit of a Caustick-stone, and held it to the place with a Pledgit of Lint a few minutes; by which I consumed the soft fleshy part over the Bone, and afterwards cut into the Bone such a hole, that in the moving of his Head I could see the Bullet lodged in the hole: which encouraging us to proceed in our work, the Bullet was afterwards taken out, and he eased of that discharge of Matter which threatned a filthy carious Ulcer. My attendance upon his *Majesty* into *Scotland* hindring my prosecution of that Cure, I left him in the hands of a Chirurgion there, and since have often seen him at Court. But the Ulcer did not close up with a *Callus*; however the place is supplied by a small plate without offence.

If the *Sinus* run transverse the Veins, Arteries, Nerves, Tendons, &c. you may then (if you think it not safe to pass a Needle in a *Cannula* through it, or if you cannot do it by reason of the make of the Part, you may then, I say,) make use of that Instrument described in the Treatise of *Fistula* and Sinuous Ulcers in *Ano*, by which you may cut as assuredly upon the end of the Director which passeth within the *Sinus*, as if you saw it before you. It is commonly used where the end of the *Sinus* lies most distant from the Skin. After which Apertion it must be kept open by a Tent, for the discharge of Matter, till it be well digested, and fit to cure. If the Orifice be small, and the *Sinus* lie but under the Skin, and in such a place as may be safely opened, it may be dilated with prepared Sponge or Gentian roots, and afterwards snipt open by a pair of Probe-scissors, or cut by a Knife upon the Director within, or laid open by Caustick. And after you have divided the *Sinus*, you may digest it with *terebinth. cum vitell. ovor.* or deterge by some of the Mundificatives set down in the Cure of Ulcers in general: and if there be occasion of more Sarcoticks, you may add *mel. com. pulv. myrrhæ, thuris, rad. ireos*, to make it more exsiccant. But commonly, the depending part once opened, the wound cureth in few days by Bandage &c. as abovesaid.

But if after all your Endeavours the Ulcers grow Fistulous, you shall find the Cure of them in another place.

C H A P. V.

Of Gun shot Wounds with Fracture.

HAVING declared unto you the way of curing Gun-shot Wounds in the soft and fleshy Parts, I purpose now to proceed to the curing them as they are complicated with Fracture of the Bones, whose firmness, driness, stability and solidity, cannot defend them from these Inconveniencies; nay, in the case I am to speak of, they are rather Discommodities. For when the Bullet striketh like Lightning, were they softer it were the better, that the Bullet might pass, and not shatter them. There is not any of the five sorts of Fractures mentioned by the Ancients which these Blows will not occasion. Sometimes they will cleave the Bone *assulatum*, according to the length; and other-while they will break it athwart; other times they will divide it like the Scales of a Fish. Nay, if the Bones be drier than ordinary, (as in elderly Men, and such in whom Nature or Diseases have made them so,) they will grind the Bone like Meal. Yet I have seen and dress'd a Soldier that hath been shot through the Joint of the Ankle without ever breaking the least part of the Cartilage.

The ways to know when there is a Fracture in the Bone are many.

Signs of Fractures.

1. *Hippocrates* bids us compare the sound Parts with the Parts affected, and observe the inequality.
2. You shall perceive a Cavity, if you touch the Parts above and under the Fracture.
3. If you handle the fractured Member, you shall perceive a crashing of Bones, by reason of the mutual attrition of the hard Bodies.
4. There will be extraordinary Pain, in regard of the divulsion of the Nerves, and distortion of the Tendonous Bodies; also a pricking in the fleshy Parts by the sharp Ends or Shivers of some Bone.
5. There will be an Impotency of the broken Member, so that the Patient cannot lean upon it.
6. The antecedent Cause (Gun-shot) will teach much in this Case, than which there never was (nor ever will be I believe) invented a more powerful one.
7. The Asperity and Inequality or Roughness of the Bone manifest it to you: but the search will give you no small assurance.

Concerning Prognosticks, your shall understand,

1. Bones receive a quicker Agglutination in Sanguine than in Cholerick bodies, by reason of the Benignity of the Serum, which sendeth out better matter for a *Callus*.

Prognosticks.

2. Bones are broke with less danger in the middle than near the Joint, where they are both more hard to be restored, and to be kept so restored; and because of the multitude of Symptoms, (which in such Wounds cannot but supervene,) are not without great difficulty to be cured.

3. And lastly, those Fractures are most dangerous which we made so deep in the fleshy Parts, that your hands cannot well come at them, to extract the loose Bones, and place the other right, and retain them so by Bandage; as those of the *Pubes*, *Os Ilion*, *sacrum*, &c. So also all those Fractures made by Splinter are exceeding dangerous, they generally shattering the Bone to pieces; in which case the Nerves, Tendons, &c. are grievously pricked and torn, and are subject to extraordinary Pain, Inflammation, Convulsions and Death, unless immediate Remedy be had by removing those Bones, or by Amputation of the Member.

Amongst

Observat.

Amongst the Cruisers in private Frigats from *Dunkirk* it was complained, that their Chirurgeons were too active in amputating those fractured Members. As in truth there are such silly Brothers, who will brag of the many they have dismembered, and think that way to lye themselves into Credit. But they that truly understand Amputation and their Trade, well know how villainous a thing it is to glory in such a work.

In the *Roman* History you will find it was not allowed at all: *Livy* tells you their Reward amongst them. But later Experience judgeth it commendable, if it be necessary, and in such shattered Limbs, where there is no hope of preserving the Patient's Life otherwise. And then it must be done in its proper time, that is to say, suddenly upon the receipt of the Wound, before the Patient's Spirits be over-heated either with Pain, Fever, &c. Of the necessity of doing it speedily I shall here give you one remarkable Instance.

A *Scottish* Soldier was brought to me out of the Field at the Battle of *Worcester*, shot with a Musket bullet into the Elbow-joint, which fractured not only the ends of the *Radius* and *Ulna*, but likewise that of the *Adjutorium*. Upon sight whereof I called *Will. Clarke* (now a Chirurgeon at *Bridgenorth*) and other my Servants about me, to cut off the Arm, and the while I endeavoured to encourage the Soldier to endure it. In answer thereto he only cry'd, *Give me Drink, and I will die*. They did give him drink, and he made good his promise and died soon after; yet had no other Wound than that. By which may be perceived the Danger in delaying this Work to the next day, when the fore said Accidents have kept them watching all night, and totally debilitated their Spirits. Which happens not, if it be done in heat of Fight; the fore while they are surprized and as it were amazed with the Accident, the Limb is taken off much easier: and if it be the Arm, some of them will scarce be kept in the Hold while the Ship is close engaged in Fight. In the heat of Fight I cut off a Man's Arm, and after he was laid down, the Fight growing hotter, he ran up, and helpt to traverse a Gun. And a *Walloon* earnestly begged of me to cut off his shattered Leg: which whilst I was doing, he cried, *Depeche vous connous vendrons à terre nous bionon*. Also others have urged me to dismember their shattered Limbs at such a time, when the next day they have profess'd rather to die. But amongst us aboard in that service it was counted a great shame to the Chirurgeon, if that Operation were left to be done the next day, when Symptoms were upon the Patient, and he spent with Watchings, &c. Therefore you are to consider well the Members, and if you have no probable hope of Sanation, cut it off quickly, while the Soldier is heated and in mettle. But if there be hopes of Cure, proceed rationally to a right and methodical Healing of such Wounds; it being more for your Credit to save one Member, than to cut off many. This following method is the best.

Cure.

Cleanse the Wound first from all strange Bodies, as Bullets, Armour, Apparel, and Shivers of Bones: so shall the Cure succeed more happily. For instance;

Observat.

A Gentleman-Voluntier, skirmishing with the Enemy before the City of *Worcester*, was brought to us run through his Arm in the middle of the *Biceps* with a Sword, and shot with a Musket bullet in the same Shoulder under the *Os scapulae*, which took away the *Coracoides*, and tore the Ligaments in other parts of the Joint. We dressed the Wound inflicted by the Sword with Agglutinatives, healing it by the first Intention. We enlarged the Gun-shot Wound, pulled out the Bullet and pieces of the *Coracoides*, &c. and dressed it up with Digestives and lenient Embrocations, &c. and afterwards deterged with *mundif. Paracelsi*. He being *Will. Clark's* acquaintance, he took care of him, and finished the Exfoliation of the Bones with *mel. ros. & spir. vini*.
After-

Afterwards, being near cured, he made his escape into his own Country. Many Instances of this kind may be given, if it were necessary.

If the fracture be near a Joint, the violence of the Blow will many times add a Dislocation also to it. If that happens, restore the Joint first to its place, before you meddle with the fracture. These Dislocations are made by great Shot or Splinters of wood whose force shatters the Limbs in pieces, or carries them quite away. But this latter rarely happens, but usually when the Member is shattered, it hangs by some little part of a Tendon, Musculous flesh, or Skin. In which case your work is, with a good Razour or Knife presently to plain the Stump, and pull up the Flesh, that you may saw off the end of the Bone close to it.

Smooth
the
Stump.
Observat.

One had his Arm shot off above the Elbow. We dress him up at first in haste, and at the next dressing his Shoulder proved out of Joint. We could not set it, by reason of the anguish of the stump; which was a greater Pain to him than his Wound, and troubled him many months after. But so it happened, and in short Stumps it is remediless. One of our Captain-Reformadoes had been served so formerly with his stump Arm.

If you will endeavour the remedying it, you must do it by help of a Bandage made above the Stump. But if it be above the Elbow, how will you fasten it. Yet in some bodies the Bone will be restored easily: therefore attempt it before you dress the Member.

♦ In another that had his Leg shot off, in the place of Amputation below the Knee, some two months after, when I wondred the Bone did not exfoliate, I put in my *Forceps* to try whether any part of the Bone was loose: and finding it very loose, I took hold of it gently, and feeling it willing to come away, I pulled it out. It was the *Apophysis* or head of the *Os tibiae*, which makes the Knee. I was surprized at it; but considering what was loose must away, I pulled it out, to the amazement of the lookers on. This was relax'd from its Ligaments by the force of the Blow.

Observat.

In these fractured Wounds made by Gun-shot the Chirurgeon ought to propose two things to himself; first the fracture, and then the Wound. To proceed orderly, you begin with the Fracture, viz. with the Extension and Coaptation, that thereby the Fracture may be reduced to its proper seat: which in all these cases must be performed with much steadiness and discretion; not with such force as in those Fractures that are without a Wound, lest the Musculous or Nervous parts, being torn, bruised or crushed, should suffer extreme Pain, Convulsions, &c. Before you begin this Operation, if the Wound be not large enough, make it so, that you may the better pull out the extraneous bodies, whether Slug, Bullet, Rags, Splinters, or Shivers of Bones; so shall the Extension be made the easier, and be less subject to Inflammation, though you should not set it at that instant; for a small Extension will afterwards serve. Whereas if the Wound be not so cleansed, those extraneous bodies, nay the smallest Shivers of the Bone, will raise such disturbance as will render it incapable of digestion. Therefore what *Hippocrates* saith of attending to the 3. 7. or 11. day, in case the Fracture be not reduced before Inflammation, would in these cases never be; for by that time the best that could be expected would be Apostemations and crude Tumours, too big to be discussed. Therefore however the Reduction of the Fracture may have been omitted, yet it will behove the Chirurgeon then consulted to extract the extraneous bodies immediately, so shall it lie more quiet, and fitter for Reduction at his more leisure. But to avoid these Inconveniencies, make your Extension so soon as you may, and restore the Bones to their former place with what gentle dexterity and lenity you can possibly. If the Wound be narrow, dilate it, as I have said, by

Extension.

F f f

Incision

Incision at the first: for these Wounds require more Dilatation than any other, that not only the bruised and vitiated Blood and other Excrements may have a free passage, but also by this means the Shivers of Bones (of which these Wounds use to be very full) may with less trouble be extracted by your selves, or discharged by Nature.

If you make not this Dilatation in the beginning, you may afterwards perhaps be forced to do it when the Part is accompanied with great Defluxion and Pain, or when the Bones are corrupt by retention of the Matter: and what condition it will then be in to admit of Incision, may easily be guessed by any one that hath common sense.

Dressing
of Gun-
shot with
Fracture.

After it is laid open, consider whether the Bone be bare or not; which you may satisfy your self in by your Eye, Finger, or Probe. If it be bare, you must apply next to it some dry or exsiccant Medicine; *Sicca siccis gaudent*; dry to dry. Of this sort are dry Lint, Powders of the Roots of *Iris*, Myrrh, Aloes, *Thus*, &c. Forbear the application of greasy Medicaments to it, for they make the Bones foul, and hinder *Callus*. Yet the parts adjacent require Digestion; therefore apply over them your Suppuratives warm, such as have been proposed in Simple Gun-shot. Then dress up the fractured Member with *empl. è bolo*, or this following: *R empl. diachalcit. with the addition of colophon. pulv. rad. consolid. maj. boli Armen. cort. granator. succ. plantag. cum ol. myrtill. & lumbricor. an. q. s. Misc. & fiat Emplast.* Then apply over the Wound a Stupe or double Cloaths wrung out of Red wine wherein have been infused *flor. ros. rubr. balauft. sumach, bacc. myrtill. summit. absinth.* or such like. This Compress will serve to keep the Lips of the Wound smooth, and defend it from the injury it may receive by Bandage.

Deliga-
tion.

The next thing which is required in these fractured Wounds is Deligation: for unless they be rightly fitted, none of these Fractures, of what sort soever, can be well united. In simple Fractures without a Wound, all kind of Bandage may be admitted; whereof you may see in my lecture of these Fractures various sorts with many Circumvolutions about the Member. And once opening in seven days will serve their turn. But in these another method of binding is required; for here the Bandage is to be loosened daily, and the Wounds to be lookt into and drest, they being here to be long kept open for discharge of excrementitious and purulent Matter, with which they abound, also for the Exfoliation of carious Bones, which lying there would corrupt the sound ones.

Bandage
to be daily
loosened
in Gun-
shot
Wounds
with Fra-
cture.

Manner of
Bandage
in Gun-
shot
Wounds
with fra-
cture.

Therefore in these kind of Wounds you must use such a Bandage as may least shake the fractured Members. For they being every day to be drest, the so often rowling them up would cause grievous Pains, and hinder union. Therefore it is that Authors have invented so many kinds of Bandage, to answer the Intentions of dressing them, and yet keep the Member immovable. Your Bandage in this case is to be made of softer and broader Linen cloaths than what we use in Simple Fractures, that it may comprehend both the Fracture and the Wound, and keep the Lips down, yet not hurt them by its too hard Compression.

Therefore we make choice of a piece of Cloth folded three or four times double, to give it the more strength, and of such a breadth as may encompass the Lips of the Wound and the fractured Parts, also of such a length as to come once about the Fracture. This Cloth must have three Slits from the ends to the middle, which middle must lie undivided underneath, to bear more equally the fractured Member, and the ends must come over one another with a Compress between over the Wound, to press the Lips thereof equally down, which would otherwise become crude, and put out with great Lips. The Compress also serves to receive the Matter, and fill up the

inequa-

Inequality. These are so to be fastned, that you may dress and undress the wound without disturbing the Member.

But because it happeneth, that in these Gun-shot Wounds the Bones are shrewdly shattered, and the wound lacerated, and by reason of the largeness of the Fracture and Wound it is extremely painful, the Member also is rendred so weak, that it cannot be kept steady by this Bandage; therefore we make use of *Ferula* or Splints, whereof I have made mention in my Lecture of Fractures in general, with the Judgments of the Ancients, who have been very industrious in contriving ways to make equal Compression, and leave a way for the dressing of these compound Fractures.

They are not to be used till the Inflammation and Flux of Humours be off, which is not until the seventh day; during which we use *Splenia*, which are linen Cloths folded four times double, and cut in length and breadth like the *Ferula*. These are to be spread with *Galen's Cerote*, or any Ointment, that so they may adhere to the Part only until you have put the Bandage over it. And this is that I propose in all Fractures where there is Pain, and fear of Inflammation, and is especially necessary in these. When to be used.

They will handsomly strengthen the Part, and make such equal Compression, that the Bones may be kept in their place, the serous Humours prest out of the *Cavernule*, and the fractured Member lie soft; which is a great help in these wounds, the whole welfare of the Patient depending upon the easie Bandage and Position of the Member. The pain and Inflammation gone off, and the wound digested, (if you think the Member not so subject to Inflammation, or that it requireth a greater strength to support it,) you may use Pastboard cut into pieces proportionable to lay over those *Splenia*: or, having fastned the *Splenia* by the broad Bandage with three heads, cut a piece of Pastboard fit to receive the lower part of the Member, and leave a place commodious for dressing the wound. Over the other part of the fractured Member you must place another piece of Pastboard to answer unto the former. These ought to be wet, that they may lie more pliant. About the Pastboard make a Bandage with three Ligatures, which you must fasten in the most convenient place for the ease of the Patient. But if the *Splenia* be wet in White of Eggs, and applied, they will strengthen the Member, and also keep it steady, without those.

If you think those of Pastboard not strong enough, you may use *Laminae*, Laminae or Plates. Copper or Tin plates lined with soft Linings, to receive the fractured Member, with Loops in the outside, to receive the three Ligatures answerable to those which lie underneath next the Plaister, that they may be fastned and loosened at pleasure, without disturbing the Fracture, in the daily dressing of the wound. And if it be in the Thighs, the Plates are best; these Parts requiring such as are of great strength and length, and of such compass as may take in the lower half of the Member. These *Laminae*, or whatever else you use, must have a large Hole cut in them for the wound to be drest through.

But I have always observed inconvenience in these Plates; that there is not so good Compression made upon the Lips of the wound through those holes as to hinder them from thrusting out; whence there ariseth a Laxity and Indigestion in the wound; and beside, the Matter that so dischargeth heats the Parts, and in hot weather corrupts and breeds Maggots. Therefore I make the Pastboard or *Lamina* over my first Bandage to incompass so much of the lower part as may support the Fracture, and come within an inch of the wound; and over the wound it self I fasten a *Splenium* of Cloth folded four times double, or a *Ferula* of Tin, Copper, or Pastboard, lined according as I Judge the Part can bear, and such as may be taken off at each dressing.

The first Bandage next to my Cerote makes an equal Compression by its

three heads meeting over one another: the lower-most presseth the Humours from below upward, and with the help of its next fellow keeps the Bones together, and forceth the Matter out of the wound: also, by the help this middle Bracer hath of the uppermost, the Matter is prest out of the upper part of the Fracture and wound to the Orifice: it also restraineth the influx of Humours from above, by virtue of the Defensative lying under it. In the dressing these wounds, you are only to undo the middle Binder to come at the wound; having a special care that this Bandage be neither too hard nor slack, but indifferently made, to the ease of the Patient.

Position of
the Part.

Having thus proposed to you the way of Deligation, I shall now proceed to the last Operation performed in these Fractures of a wound, which is a commodious Position or placing of the Member, which (as I have told you in the Lecture of Simple Fractures) ought to have three Conditions.

1. It must lie soft, lest the Compression offend the hurt Parts, and cause Pain and Inflammation.

2. Equal: for if the Member be placed otherwise, it becomes distorted, and the operation succeeds ill.

3. Lastly, it must lie higher than the Parts next the body, especially the first 3 or 4 day. For if it incline downwards, the Humours by their own weight will easily flow to the Part afflicted. How this Position is performed, I have set down in the Lecture of Simple Fractures, to which I refer you.

The fractured Bones of the wounded Part thus restored to their natural places, and the Wound digested, also the Inflammation and other Accidents gone off, which is commonly about the seventh or ninth day, you shall then unloose the Bandage, take off your restrictive Medicament, and apply the *Emplaster. catagmat.* in our *London Dispensatory* (or some of these underwritten) over the fractured Member, which may add strength to the Part, and further the Generation of *Callus*. *R. resinæ abiet. ceræ, an. ℥j. pulv. cort. tilie ℥iij. succ. geranii ℥iij. coq. ad Cerati consistentiam:* or this; *R. mucilag. rad. consolid. maj. visci pomor. & populeon. an. ℥iij. succ. geranii ℥vj. osteocol. ℥iij. pulv. cort. tilie ℥ij. vitell. ovor. num. xx. terebinth. ℥j. ol. lumbricor. ℥iij. coq. omnia bene permixt. ad Cerati consist. pro usu.* But if you keep up the temper of the Part, you need not doubt of a *Callus*. I commonly in these cases make use of *empl. strict. Paracels. part. ij. empl. diachalcit. part. j.* Over these apply a double Cloth dipt in Red wine wherein have been boiled some of the abovementioned Plants. Then place the former Bandage again, and over it those *Laminae* of Copper, or *Splenia* of double Cloths dipt in Whites of Eggs, and wrung out hard. These latter will sit close to the Part, and after they are dry, will support the fractured Member well.

After the ninth day we supposed the wound well digested; therefore we forbear the use of suppuratives, and use such Medicines as are detergent, as the *mundif. Paracelsi*: or, if you please, *R. vinca pervinca, peti, persicaria, beton. an. Mj. flor. hyperic. verbasc. an. Pj. rad. aristoloch. utriusque an. ℥β. thuris, myrrhæ, sarcocoll. ireos, an. ℥ij. coq. in vino albo, addendo colaturæ mellis rosacei q. s.* This being cast in with a Syringe will deterge and incarn: Or you may make it into an Unguent by the addition of *terebinth. Wax, and ol. hyperic.* and apply it upon Dossils, Pledgits, or Tents.

If there be *Caries*, you may make a Decoction of *scordium, vinca pervinca, pencedanum, gentian. cort. guaiaci, rad. ireos, myrrha*, in Wine, adding *spir. vini*, or *extract. scordii*. If the *Caries* yield not to these, touch it now and then with some of the following Medicines. *R. ol. myrrhæ distillat. per descensum & purificat. cum spir. vini ℥β. olei caryophyll. ℥ij. ol. sulphuris ℥j. Misc.* This will in a short time remove the Cariosity; afterwards you may proceed by Epuloticks.

Vul-

Vulnerary Plants are here of great use, and may be prescribed as followeth.
℞ aristoloch. rot. ʒii. fol. serpentariae, consolidæ utriusque, geranii, columb. saniculæ,
an. Mj. beat them into gross Powder, and boiling them in a Gallon of Wine in
 a Vessel close stoppt, give the Patient thereof Morning and Evening ʒiij. at a
 time. You may give ʒj. of *osteocoll.* powdered in a draught of it, or the Deco-
 ction of *vinca peruviana* made with Wine, for confirming and hastning the *Callus*.
 In the rest proceed as in the latter end of Simple Fractures is mentioned.

A Souldier being shot by a Musket-bullet into the fore-part of the Arm near
 the *Biceps*, it fractured the Bone, and passed quite through. I endea-
 voured by Extension to place the fractured Bone even together but could not :
 Upon which I dilated the latter Orifice by a large Incision according to the
 rectitude of the Member, to pull out those Fragments of Bones which hinder-
 ed their right Coaptation ; and putting my Finger into the Wound to that
 purpose, I pulled out a ragged piece of a Bullet ; whether it was part of that
 which had passed through was the question. Some of the By-standers thought
 he was shot with a brace of Bullets : But I rather think the Bullet was torn
 by the Bone, and that this part was it which had made its way thro'. How-
 ever, by this Extraction the main Bone was rightly placed, the Shivers with
 the extraneous bodies removed, the Matter happily discharged by this depend-
 ing Orifice, and the Patient was cured by the common Intentions of Healing
 these fractured Gun-shot Wounds. Whereas, if I had taken it for granted that
 the Bullet was passed through, and contented my self in having endea-
 voured the reducing of the fractured Bones, and so dressed him up, it had cer-
 tainly inflamed and gangrened. This confirms that Doctrine in setting of
 Bones, that if any Bone will not be placed equally amongst his Fellows, you
 ought to cut upon it, and take it out.

1. Obser-
 vat. of a
 fractured
 Arm.

In heat of Fight at Sea, among the many wounded men that were put down
 into the Hold to me, one of them had his right Arm extremely shattered about
 two Fingers breadth, on the outside above the Elbow, by a great Splinter. I
 ought to have cut off this mans Arm presently : But a sudden cry that our
 Ship was on Fire put me in such disorder, that I rather thought of saving my
 self than dressing my Patients. I hastily clapt a Dressing upon the Wound,
 and rowled it up, leaving his Arm in his other Hand to support it, and endea-
 voured to get up out of the Hold as others did, verily believing I should ne-
 ver dress him nor any of them more. But our men bravely quitted themselves
 of the Fire-ship, by cutting the Sprit-sail Tackle off with their short Harchets,
 (which they wore during Fight sticking in their Sashes.) So we were freed of
 the Fire, and by our hoisting up the Top-sails got clear of our Enemy, and I
 returned to my work. But I was at a loss what to do with this man, who lay
 not far off complaining of his Arm. I would have cut it off instantly with a
 Razour, (for the Bone being shattered, there needed no Saw :) but the man
 would not suffer me to meddle with his Arm, he crying, it was already dressed.

2. Obser-
 vat. of a
 Fracture
 made by
 a Splinter.

The Fight being over, and we got into the next Port, I caused this Mari-
 ners Bed to be set up : (which was four pieces of Wood nailed together and
 corded, and a Bears Skin laid upon it, and fastned between two Guns to the
 Carriages :) upon this I saw him placed ; and having ordered his Arm to be
 laid so that I might the better come to dress it, I sent for Dressings, and laid
 them orderly upon a small Pillow well stuff and quilted in the middle. Upon
 this Pillow I first laid a soft double linen Cloth, next to that three Ligatures,
 then a Pastboard wet in Vinegar, to make it more soft and pliant ; upon that
 I laid a double Cloth, of such length and breadth as might serve to encompass
 the fractured Member, which I cut from each end to the middle into three
 Binders :

Binders: Over the middle of this I placed a *Splenium* of Cloth four double, four Fingers in breadth, and of such a length as to give strength to the Fracture: Over this lay my Defensative spread upon a thick Cloth, of such a breadth and length as to take in the whole Arm. Dressings thus laid upon the Pillow, I cut off the other from his fractured Arm, and placed the Pillow with these Dressings close by his Side; so that I saw his Arm laid as I designed upon my Restrictive, and his Hand upon his Breast. Then putting my Fingers into his Wound, I pulled out first a piece of a Splinter an inch thick or thereabouts, more or less; then Rags and Bones, great and small; I left not the least Shiver. When I had so cleared the Wound of all the extraneous bodies and loose Bones, I was amazed to feel what a void space there was between the ends of the Bones. But I proceeded, and cut off the lacerated Lips, which were of no use, and drest up the ends of the Bones with a couple of Dossils dipt in *spir. vini*, and *mel. ros.* warm. The rest of the Wound I drest as warm with *axung. porcin.* and *Merc. præcipat.* with some little *ol. terebinth.* spread upon Dossils, which I placed lightly within the Wound, and upon Pledgits without, with an *empl. diachalcit.* malaxt with *ol. myrtill.* over all the Wound. Then I embrocated the fractured Arm *cum ol. myrt. & olivar. immatur.* and a little *acetum*, bringing my restrictive-Emplaster, which lay under the Arm, over the whole Arm, from the Arm-pit to the Elbow and close round about, only leaving a space to dress the Wound.

This gave a strength to the weak Member, and was designed to prevent the Influx from above. Just under this Emplaster there lay a *Splenium*. To answer that I applied three more, one on each side, and another above: Which four were of such a size, that they, lying a little off from one another, encompassed the Arm. They were spread lightly with a little Cerote made of *axungia* and Wax to make them adhere where I placed them.

Then I brought the Bandage which lay under the *Splenium*, with three heads at each end. The lowermost of these took in the lower part of the Arm, from the Elbow upward, with part of the Fracture, and was fastned on the exterior part of the Arm. This prest the *Sanies* from the neather part of the Arm to the Wound, and hindred the lapse of Matter that way. The middlemost was made to prest the Matter out of the Wound, and keep the Lips down. The uppermost served to restrain the Influx, as I said, and prest that Matter out which was already in the Part. This Bandage was made with great moderation, and so fastned, that it might be loosened without trouble to the Patient. Then I brought the wet Pastboard close to the sides, and cut another piece to answer it, which I wetted in *aceto*, and by the three Ligatures under made them fast, but without disturbance to the Patient. If it could not have been so put on, I should have forborn the use of them, the Cure of these Wounds consisting in the easie Dressing and quiet Position, without which you will not cure one of them. The Pastboard as it dried, stiffened, and retained its shape, preserving the Fracture in the Position I left it, and that with a very slack Bandage. Thus I finished the first Dressing, leaving my Patient in much ease. He slept pretty well that night, and was the next day as well as I could expect. He was let blood the second day, and kept to a spare Diet: But we allowed Wine as a Cordial to all our Patients.

The third day I drest him again, took off the upper Pastboard, and loosened the heads of the main Bandage; also I took off that *Splenium* which was over the Wound, and raising up the Emplaster from the Wound, took out many Dossils, found it warm and well disposed, and drest it up quick with my Suppuratives hot, and an Emplaster as before. I stirred not the Restrictive, but made now a compress more particularly for the Wound, purposing not to re-
move

move the two outermost heads of the main Bandage, unless it were sometime to give a little breathing to the Member: But the middle I opened as often as I thought fit, to dress the Wound. The other two had short *Splenia* to make the Bandage equal. But I was not then satisfied how the space between the fractured ends of the main Bone could be supplied with *Callus*. My Patient was easier than any of my other with fractured Wounds. When it came to my turn to be visited by my Brother Chirurgeons of our Squadron, they did not dislike the Wound, nor my way of dressing, (for we being used to see one another's Patients, had all much one way of dressing :) but they laught at the excuse I made for not cutting off his Arm, and doubted I should be yet forced to do it. But I kept my Patient flat on his Back, and that after a while was his greatest pain; for the Wound digested, and the Tumour was not then considerable. After the Wound was well digested, and the bruised Flesh separated, I renewed the Dressings, taking all the old ones off, and fomented the Member with warm Water, to give a breathing to it; then applied a Catagmatick emplaster, dressed the wound with *mundific. Paracels.* or such like, and bound up the Member as at first, and so continued my way of Dressing as I saw cause, putting into the Wound only a Dossil or Tent made upon a Skewer soft and hollow, to give way to the Wound to incarn; I scarce using any Injection, but by gentle compression assisting nature, who seldom faileth in supplying the lost Substance in Wounds, if we disturb her not by improper Applications. The next taking off and renewing these Dressings of this fractured Member was occasioned some 16 or 17 days after, by a troublesome itching of the Part, which was occasioned, I suppose, partly from his liberty in Diet, partly by the heat of the Weather, and want of Transpiration. Upon this account I took off the Dressings, bathed the Member with Sea-water, and dressed him up with *emplast. de lithargyro*. The Wound was about this time well incarned within, and the Lips beginning to cicatrize from their edges, I dressed them with *Epuloticks*, as *unguent. tutie*, &c. All this while I kept my Patient upon his Back, and renewed not the whole Dressing until I was again necessitated. One day coming from the shore, (where our wounded men had liberty to lodge if they desired it, and were dressed up by us there) I found this Patient with a heat all over his Body like an *Erysipelas*. At which he was much affrighted. He had, it seems, drank Wine too liberally with his Mates, (as they would most of them do, if they were any thing well.) Unless it rather proceeded from a generation of *Callus*, in which case it usually happens. I let him Blood, and dressing him as in an *Erysipelas*, finding his Arm pretty strong, and his Wound healed within, and in a fair way of cicatrizing, I raised him up, after he had lain about 8 weeks. All which while I believe he never stirred his Arm from the time I first placed it, but only while I renewed the Dressings; he being the most patient man in that respect I ever attended: and in truth, without that Submission he could scarce have been cured.

Erysipelas
upon the
generati-
on of *Cal-*
lus.

There was in this Patient a strong *Callus* filling up the void place of the lost Bone at least 2 Inches, with little or no shortning of the Arm: but the Joynt of the Elbow was so stiff from the Position it lay so long in, that he could not stretch that Joynt whilst I knew him, which was until that Ship was cast away.

My Memory will be much cried up, for remembering so many particulars in a Patient so many years since cured by me. But if you consider how remarkable a case it was, and in my Trade, there will be less wondring at the possibility of it. You may enquire what was done by me in the Cure of Captain Reade, where the loss of his Jaw was supplied by a strong *Callus*, and that Cheek made uniform with the other. It will be long remember'd by the then Standers-by, though not of our Profession.

In our Sea-fights oftentimes a Buttock, the Brawn of the Thigh, the Calf of the

the Leg, are torn off by Chain-shot and Splinters. All these are contused Wounds, and look black, and do too often deceive the unexperienced Chirurgeon, he taking them by their aspect to be gangrened, and by dressing them as Mortifications with *Ægyptiac.* and *spir. vini*, doth certainly sphacelate them; and those persons die miserably afflicted.

Whereas if they be considered rightly, though they look like Flesh long hang'd in the Air, of a dry blackish colour, yet they have warmth, and by Lenients as is prescribed in Simple Gun shot Wounds, they would digest, separate their Sloughs, and incarn. But they are slow in Digestion, and require good Fomentations and Embrocations to cherish the native heat, which is much weakened by so great a loss of Substance. These require *oleum terebinth.* to be mixt with your Digestive: But you must have a care you do not inflame them and cause pain by adding too much of it: A Spoonful to six ounces of your Suppuratives is enough in the driest Habits. Your judgment will best direct you, and your Patients complaint: It being unreasonable to hope that wounds can digest, while they are accompanied with much Pain.

C H A P. VI.

Of Gun-shot Wounds in the Joints.

Great care
to be used
about
these
Wounds,
and why.

THE Wounds of the Joints are subject to more grievous Accidents than those I have heretofore mentioned; therefore they require your more particular care; the Tendons and Ligaments being inserted near the Joynts for the motion thereof: there are also Membranes, which do consequently render them of a most exquisite sense. The Trunk of Nerves also in every great Joint passeth through, for the use of the Member that is beyond it. To which I add, that the Part being exsanguous, the natural Balsam of the Body is here more sparingly supplied for the help of the Cure.

What the Pains are, may be judged by the Wounds in the lesser Joints. Captain F. in *Musselborough* Fight was shot in one of his Fingers, and the next day so grievously tormented, that he walkt up and down like a Mad-man, and could take no rest until his wounded Finger was digested: Yet his pain was not so great in his wound as in his well Fingers.

Prognostick.
Cure.

The greater Wounds are attended with much more vehement Pain, Inflammation, *Delirium*, Convulsions, Gangrene, and are commonly deadly:

In these Gun-shot Wounds, the extraneous bodies and Shivers of Bones must be presently drawn forth: Therefore if the Orifice be not large enough, make it so. But in enlarging the inner or lower Parts in the hollow of the Ham, Arm, Arm-pit or Groin, have a care, for they are subject to great Bleeding. The extraneous bodies being drawn forth, hasten Digestion, by dropping and applying warm upon Dressings or Pledgits some of these following Digestives: For Tents are to be used with caution in these Wounds.

R terebinth. lot. in spir. vini ℥iiij. thuris, myrrhæ, mastich. an. ʒj. ol. hyperici ℥iiij. vitell. ovor. num. ij. croci ʒij. Or, R terebinth. ʒij. myrrhæ, thuris, corn. cervi usti, an. ʒiiij. ol. scorp. de castoreo, lumbricor. sambuci an. ʒβ. vitell. ovor. num. ij. Apply either of these warm. If stronger be required, you have *ol. terebinth. de castoreo, scorpion. &c. R ol. terebinth. ʒj. ol. hyperici, cum gum. ʒij. euphorb. pulv. ʒj.* drop this very hot, and apply the formentioned Digestive over all, then embrocate the Parts about with *ol. lumbric. & hyperici*, and lay over all this following Cataplasm: *R farin. hord. & fabar. an. ℥j. flor. cham. meliloti, ros. rubr. scord. absinth. pulv. an. ʒvi.* Decoct it in the Broth of Offal, if you would have it lenient, otherwise in Oxy-mel, adding *ol. ros. & chamemel.*

Or

Or this; R*c* mucilag. radic. althææ, consolid. maj. an. ℥iiij. flor. ros. rubr. beton. cham. subtil. pulv. an. ℥β. farina lini, fænugræci, an. ℥iii. farina bord. & fabar. an. ℥vj. coq. in vino, adde ol. ros. & lumbricor. an. ℥jβ. mell. ℥ij. vitell. ovor. num. iij. The Wound digested, you may deterge with this; R*c* farina orobi ℥jβ. thuris. rad. ireos, an. ℥vj. succi apii ℥iiij. mell. comm. & terebinth. an. ℥ij. Misc. fiat Unguentum. The Wound deterged, you may dress with this Sarcotick. R*c* summit. hyperici, equiseti, plantag. beton. an. Pj. rad. consolid. maj. tormen- tillæ, an. ℥iij. sevi hircini ℥iiij. lumbric. terrest. lot. ol. mastich. an. ℥ij. vini odorif. q. s. coquant. ad consumptionem vini, postea colentur cum forti expressione, deinde adde resina pin. ℥j. thuris, myrrha, mastich. aloes, an. ℥β. cera ℥iiij. Misc. fiat Unguentum S. A. Ol. Aparici is excellent in these Wounds, either alone, or heightened by any of the former Prescriptions: So is the Balsam in the Chap- ter of Wounded Nerves. If the Bone be bare, you must be careful that you do not foul it by your greazy Medicaments: And if Pain be violent, and yield not to Anodynes, cut off the affected Tendon, and whatsoever corrupts, lest it taint the rest. But in these great Wounds you are first to consider how curable they are, and endeavour to preserve the Life of your Patient by a timely Extirpation, before his Spirits be too much exhausted. Of which this following Story will give you warning.

A Page of Lieutenant-General D. L. was shot through the Knee. The Bullet entred in by the lower and exterior side of the *Rotula*, and pas- sing through the Joint out in the hollow of the Ham, tore the Ligaments and Nerves, and fractured the Joint as it passed, rending the Artery in going out. This Wound was mortal the very minute it was inflicted, and the party ought then to have been dismembred: But such Proposals were not admitted, of in the first dressing, whilst there was, as they judged, hope. Afterwards the vehement pain brought suddenly on severe Accidents, as Fever, *Delirium*, &c. and then it was too late to make Amputation. I made my first Dressing by the Application of a Digestive dipt in *ol. lumbric.* warm, and embrocated the Parts about with *ol. ros. cum aceto*, applying my Restrictive over all. In the depending Orifice there was a throbbing of the Arterial blood, as in an *Aneurisma*, the blood being choakt in by the contused Flesh: It therefore was not there to be tented, for fear of making a Flux of blood; nor yet could we hope to stop the bleeding by Cautey, actual or potential, that Part being full of Ligaments and Tendons, the burning whereof would have been difficult, and grievous painful. Wherefore I drest that Wound with the same Digestive mixt with *pulv. Galeni* upon Dossils with thick Pledgits, and some of the same Restrictive over that, with such Bandage as that Part was capable of; hoping this way to hinder the Influx of Humour, and thinking by such Dressings the Wound would digest. But the pain increased vehemently, and yielded to no Application, nor was there any possibility of conveying any Instrument, whereby I might thrust or pull out the shivers of bone, if any such were in between the heads of the Joint. Mr. *Penicuke*, formerly General Chirurgion to the *Scottish* Ar- my, and other Chirurgions were with me at the Dressing of this Patient: But in spight of all our Endeavours, the Putrefaction increased, and was at- tended by *Delirium* and Spasm. Death followed, as commonly it doth in all such Wounds of the great Joints. I could instance it in many, but the late case of Sir J. L. may serve for all. He had many of our most experienced Chirurgions, with the eminentest Physicians to help them; yet they had no better success. Therefore at Sea, while they are warm with heat of Fight, we dismember them, and by actual Cautey stop the Flux of blood.

Observat.
of a Shot
through
the Knee.

C H A P. VII.

Of Gun-shot Wounds in the Belly.

I Have now briefly run through the Parts not principal, and purpose next to say somewhat of the principal Parts, as the Belly and Breast. And that you may the more certainly know the Part wounded, I shall give you a short Description of them, and then shew you how such Wounds are to be handled in order to their Cure.

Abdomen
described

The Belly is called *Abdomen*, or the inferiour *Venter*. It begins from the Bastard-Ribs, and extends it self to the Groins; and is divided into three Regions by our Anatomists, the upper, middle, and lowermost. The uppermost is called *Epigastrium*, the middle *Regio umbilicalis*, the inferiour *Hypogastrium*. The sides of the uppermost are termed *Hypochondria*. The right *Hypochondrium* possesseth all the Liver: In the left is the Spleen. Between these is placed the *Ventriculus*, or Stomach. In the middle part of the *Abdomen* is the Navel; round about which lie the Guts, and behind those on each side the Kidneys. In the sides of the inferiour part are the *Ilia*, with the *Peccen* or *Pubes* in the middle: Under which lies the Bladder. Thus much for the internal Delineation.

Wounds
not pene-
trating.

The *Abdomen* consists moreover of Parts containing, and contained. Parts containing, or Teguments of the *Abdomen*, are either the common, which reach all over the Body, as the *Cuticula*, *Cutis*, *Pinguedo*, *Membrana carnea*: Or the particular and proper to this place, which are the Muscles of the Belly, the *Peritoneum*, and in respect of the Guts the *Omentum*. The Parts contained are some of them designed for the Nutrition of the whole Body, others for Expurgation, and others for Generation: The Stomach, Small intestines, *Mesenterium*, *Vena porta*, *cava*, *Arteria magna*, and *celiaca magna*, the Liver and Spleen, serve for Nutrition. The Bladder, Gall, all the Intestines, but especially the great ones, Kidneys, and Ureters, for expurgation. And for Procreation, the *Vasa præparantia & deferentia*, *Prostata*, and *Uterus* in Women. These parts containing and contained are subject to Gun-shot; when various Species arise of these Wounds. Sometimes the containing Parts, as the *Cutis*, *Pinguedo*, *Caro Musculosa*, only are wounded; so as neither the *Peritoneum* nor the other internal Parts suffer any hurt.

And this hath happened to many in Service, who have been brought to me as mortally wounded, whereas upon search I have found the impression only upon a greazy leather Jerkin, or their Bellies black and a little scratcht by the Bullet. Yet these are even subject to Tumour, and so do require lenient Embrocations, with an *empl. de bolo* or the like. In others the Skin, and Flesh under it, is sometimes wounded, and no farther. These are by us called Wounds of the Belly, not penetrating, and are cured as Gun-shot Wounds in Flethy parts: In which cases all those Application are approved of which have been delivered in Simple Gun-shot Wounds.

Wounds
penetra-
ting.

But this I must take notice of to you, as having often observed it, not only in Gun-shot Wounds, but in Abscesses of the Belly, that from the Laxity of the Parts they are subject to great Defluxion: Especially in scorbutical and ill Habits of body, the Matter is apt to insinuate it self amongst the circum-jacent Muscles, raising them up, and rendring them Sinuous Ulcers difficult of Cure; and that because we cannot make such Bandage on them, by reason of their Figure, Site and perpetual Motion, as elsewhere may be made. These thus briefly considered, we pass to the other Species: For the Bullet is for the most

most part carried with such force, that it not only wounds the fleshy parts, but also pierces the *Peritonæum*, hurting most and end the Internals; it being indeed impossible that the Bullet piercing the Parts containing should miss the contained, which are soft and tender.

I have seen sometimes in the Wars a Soldier shot scarce to the *Peritonæum*, yet the Contusion hath been so great, that the *Peritonæum* hath come off upon Digestion: In which case the Bowels commonly suffer under severe Colicks, and there ariseth Difficulty of breathing, &c.

If the Bullet penetrates through the *Peritonæum*, though no farther, yet the Contusion makes foul work, and requires speedy relief. But if it hath wounded the internal *Viscera*, then you must consider what the Parts are that are wounded, whether the Liver, Stomach, or which of the Intestines; which you may apprehend from the Site of the Part, and the Accidents accompanying such Wounds, also by the proper Symptoms of each Part.

According to *Celsus*, Lib. 5. Cap. 26. the Liver being hurt, there followeth an Effusion of gross blood: If the *Porta* or *Vena cava* be hurt, the right *Hypochondrium* is oppressed: If the Artery be wounded, the blood is florid, and bursts impetuously forth, and the Patient expires with it. But if the Stomach be hurt, *Singultus* or Hiccough follows, with Vomiting and *Nausea*, and the Patients Sustenance comes out of his Wound with the Chyle, and cold Sweats shew his languishing condition. If the lesser Intestines be wounded, he will be troubled with poraceous Vomiting, and what he eats or drinks will pass out of his Wound in less than half an hour; and so it will continue to do as long as he lives. If the great Intestines be wounded, the Excrements and filthy Smell will demonstrate it. If the Wound be on the left *Hypochondrium* under the Short ribs, you may conclude the Spleen wounded; the blood which floweth forth is black; there is also a Tension and Difficulty of breath. If the Kidney be hurt the Wound is in the Region of the Loyns, near the *Vertebra* under the *Diaphragma*. The more certain sign thereof is from the Pains reaching to the Groins and Testicles, with difficulty of Urine: And that Urine which he voids is either mixt with Blood, or else pure Blood. If the Ureters be wounded, the Urine comes out at the Wound. If the Bladder be wounded, that part of the belly is tense, he hath great pain in his Groin, and his Urine is discharged by the Wound; the Stomach suffers by consent, and the Part wounded demonstrates it. If the Womb be wounded, the Groins and *Coxa* are afflicted with the Pain, and the blood not only flows by the Wound, but per *Vulvam*; they are troubled in Mind, and have other shrewd Symptoms of Death.

Signs of Wounds of the internal parts of the Abdomen.

Prognostick.

For what concerns the Presage of these Gun-shot Wounds, if they be only in the Region of the Belly, they are not without peril, especially if the middle, where the *Linea alba* is: But if they penetrate, there is great hazard, for these Parts so shattered seldom recover. What we have sometime since seen, of a man discharging his Excrements out of the *Colon* on the left Side, and heard of other like Wounds of the Stomach, are rather Miracles than the work of the Chirurgeon. But they were happy that were instrumental in those Cures. If *Celsus* in his time determined those Wounds mortal made by cutting Weapons; how much more must they be such that are made in our age by Gun-shot? Yet Nature, as one saith in his *Vulneribus, sæpe miracula facere solet*, is often as merciful and miraculous in the Cure, as the Blow was cruel.

In order to the Cure, you must begin with the Extraction of the Bullet, lest it sink the most inward parts, and there afflict the *Viscera*; as also of the Rags carried in with it, lest they beget Putrefaction. That done, you must reduce the Intestines and *Omentum*, lest they inflate and corrupt. After the Extraction of the extraneous bodies, you must hasten Digestion, and mitigate the Inflammation.

The Intestines and *Omentum* are disposed to Reduction by warm discutient Fomentations: But if there be not an Opening wide enough, you must enlarge the Wound. If the *Omentum* be corrupted, make a Ligature below that corrupt part, and cut it off, leaving the end of the Ligature hanging out, till it shall be cast off by Digestion.

If there be *Hæmorrhagia*, you must inject such Medicaments as have a refrigerant and astringent quality: And those may be, *aq. utric. plantag. spermat. ranar.* or Red wine, *cum syr. de ros. sicc.* with *pul. bol. Armen. terr. sigill. sang. dracon. aloes, thuris.* Make a mixture of some of the same Powders with a new-laid Egg, *ol. mastich. & lumbricor.* and apply it upon a Tent fastened to a Thread, as is before described, then spread the rest upon a Stupe, and lay it over all. But if there be no Flux of blood, digest as fast as you can.

Wounds
of the Stomach
and
Guts.

In order to the Cure, *Fallopins* hath recommended to our use this following, by the use whereof he cured Wounds of the Stomach and Intestines. *R. fol. pilosellæ, plantag. rad. tormentill. consolid. maj. flor. hyperici:* decoct these in Red wine; strain it out, and add to the said Liquor *manne, thuris, ol. mastich. resin. abiet. terebinth. Cyprie, croci & verm. terrest. an. q. s. fiat Sarcoticum S. A.*

In all these Wounds of the Belly I have used such like Medicaments as I have offered unto you, and applied to the Wound it self Digestives, as in Simple Gun-shot, and endeavoured by good Fomentations, Embrocations and Cataplasms, to preserve the natural warmth of the part.

Wounds
of the
Kidneys.

In Wounds of the Kidneys, you must inject such Medicaments as have an absterfivè and drying quality; as *rad. consolid. irid. aristoloch. rot. also myrtill. cand. equin. plantag. balanst.* Decoct these in *aq. chalybeat.* adding afterwards some Red wine and *syr. de ros. sicc.* thereto. Then dress up the Wound with a Digestive *ex terebinth. cum integr. ovo.* with a little *terra sigill. thus* and *Mastich.* and embrocate with *ol. hyperici;* applying *empl. diachalcit.* malaxt with *ol. ros.* or a Cataplasm. *ex far. bord. fabar. & orobi* decocted in Oxymel, and made up with a new-laid Egg and *ol. ros.*

Wounds
of the
Liver,
Spleen,
&c.

If the Liver or Spleen be wounded, there will be a great Flux of blood; in which case I offer this to you: *R. plantag. pentaphyll. polygon. millefol. myrtill. ros. rubr.* decoct these in chalybeat Water. You may use it as an Injection, with an addition of *syr. de ros. sicc.* or you may add to it *pulv. thuris. sang. dracon. bol. Armen. acacia,* and so it may be applyed as a Liniment upon Tents or Pledgits.

Thus you are to dress all the Wounds in the particular parts of the Belly.

The Wounds of the Womb are accounted deadly, the very least of them, and so are all the abovesaid made by Gun-shot; yet you are to proceed in the universal Regiment, and with Clysters, Bleeding, and good Vulneraries, endeavour to dispose the Parts to Sanity.

C H A P. VIII.

Of Gun-shot Wounds in the Thorax.

AMongst the principal Parts which are subject to Gun-shot, the middle *Venter* or *Thorax* is reckoned, with the Parts contained in it, *viz.* the Heart, Lungs, great Artery and Vessels, with the *Mediastinum.*

Difference.

These Wounds are distinguished as those of the inferiour *Venter.* Sometimes the Wounds are only of the external Parts, without penetrating into the Breast; other times they penetrate through the Ribs and *Pleura:* In which latter case the principal *Viscera* are wounded, or not wounded.

Not penetrating.

If the Wound do not penetrate into the Cavity of the Breast, but is only in the Musculous flesh, it must be cured as Wounds in the Fleshy parts. If there be

be a Fracture with it, it must be treated as a Wound with Fracture, taking care to extract the broken Bones, lest they prick the *Pleura*, and cause Inflammation.

But if the Bullet hath penetrated deep into the Cavity, it may be discerned by the passing forth of the air with noise: There will also follow a Flux of blood by the Wound, or Mouth, or by both; unless the blood fall down upon the *Diaphragma*; and then the Difficulty of breathing and such like Symptoms will demonstrate its Penetration. And if the Lungs be wounded, there will be a Cough, with Difficulty of breathing, and frequent Sighing: if there be an effusion of blood, it will, according as it is much or little, flow forth of the Wound, or be cought up, sometimes both: The Patient will incline to lie much upon the Wound. If the Heart be hurt, the blood floweth impetuously, and is reeking hot, their Spirits sink, and cold Sweats bedewing their Face foreshew their approaching Death.

Penetrating Signs.

The wounded *Diaphragma* is accompanied with Difficulty of breathing, also a Hoarseness, with a great Pain about the false Ribs; the *Diaphragma* is drawn upward, and the Spine is affected.

If the great Vein or Artery be hurt; a terrible Flux of blood follows. If it flow from the right side, the *Cava* is hurt; but if from the left side we suppose it the Artery. You will discover it by its Saltation and florid colour. If the *Porta* be wounded, the Patient dies at the instant; and so he doth of all the rest. If the *Spinalis medulla* be wounded, the Nerves are resolved, and a Palsie follows, but more immediately in the Part under the Wound.

Almost all these Wounds, made by Gun-shot are mortal; but it is not consistent with Religion or Humanity, to leave such people without help: For sometimes we happily prolong the life of some of them, and now and then cure one.

I shall therefore proceed to deliver you what concerns their Cure, both as to the internal Remedies given by the Mouth, and to those which relate externally to the Wounds.

In the first place, you must make Extraction of the Bullets, and other extraneous bodies, Shivers of bones, &c. to give way for the discharge of Blood and Matter contained in the Cavity of the *Thorax*: then dress the Wound with a Tent dipt in this or such like; *R. bol. Armen. corn. cerv. ust. ol. ros. & sambuc. farin. volatil. cum ovo. integr. Misc.* Spread a compress with some of the same, and apply it over the Wound. If the blood stop not by this Dressing, let blood in the Arm, and repeat it as often as you see cause, applying some of the Astringents set down in the preceding Chapters. Or you may inject some Astringent Decoctions, which is otherwise than was advised in Wounds made by Puncture: For in Gun shot Wounds the Orifice is wide enough for the Injection to return out again, insomuch that not only the astringitive Intentions ought to be pursued, but also the deterfive; here being loss of Substance. Therefore in case of bleeding you may inject a Decoction of *fol. plantag. ulmi, urticae, vincae pervincae, ros. rubr. fol. myrtyll. in aq. germ. querc.* adding a little *bol. Armen.* and *syr. de symphyt.* Or for present occasion use Red wine, it being excellently good in such bleeding Wounds, either given inwardly by the Mouth, or cast in by a Syringe. Having thus stopt the blood, you are to digest the Wound with such like: *R. terebinth. lot. in decoct. bord. ʒij. pulv. thuris, myrrhae, an. ʒij. sem. fennugr. pulv. ʒj. ol. hyperici q. s.* Arm short Tents with some of it; then apply over it a Pledgit with some of the same, or with such Suppuratives as in Simple Gun-shot Wounds are prescribed, and embrocate the Breast and Parts about with a mixture of *ol. amygdal. dulc. lumbric. and unguent. dialtheae*, applying over all an *empl. diachyl. simpl.* malaxed in some of the same. After Digestion you will find it necessary to deterge and incarn. It is not material whether the Deterfion be made by Injection or Unguent, there may be use for both; to which

which purpose I have set you down both sorts, and shall begin with an Injection, as supposing the matter may thereby be disposed to discharge by the Wound. The milder may be a Decoction of *pilosella* with *mel. ros.* If stronger be needed, *R. extract. scord.* dissolved in *vino albo*; or, *R. fol. pilosellæ, cand. equin. plantag. tormentill. consolid. aristoloch. rot. rad. iridis, & sarcocoll.* boil these in *aq. font.* adding Wine thereto with *mel ros. q.s.* The Unguent may be this following Mundificative: *R. terebinth. ʒij. farin. bord. cribrat. ʒj. thuris, sarcocoll. rad. iridis, an. ʒiij. mellis ros. ʒiiij. Misc. S. A.* and dress the Wounds in the Flethy parts with the same. The wound deterged, incarn and cicatrize as is said in other Wounds; but keep a *Cannula* in it until it cease to run. *Celsus* proposes, that in all these internal Wounds the external Parts be vesicated, to make more powerful Revulsion from within: And the Medicament he proposes thereto is *Sal bene contritus cum cerato mixtus, quia leviter cutim erodit, eoque impetum materie quo pulmo vexatur evocat.* This his proposal may be proper in Wounds made by sharp Weapons, as by Arrows, &c. But here in these Wounds there is vexation enough outwardly to make a Revulsion, if that signified any thing. In the dressing these you must be careful to cut off the Sloughs without, lest from them a stinking Gleet distil upon the *Viscera* within. In order to the Cure, Clysters are also required, to keep the Body open: And the more temperate Pectoral Decoctions are here proper, such as that in the *London Dispensatory.* To them may be added, *syr. violar. de cichor. de liquiritia, jujub. capill. ven. de symphyto,* and such Lohochs as may take off the harshness in the *Aspera arteria.* Their Diet ought to be slender, and their Drink, Medicated Ale or *Hydromel,* wherein Pectorals have been decocted are proper in all these Wounds; so are also Emulsions: And after the Fever and such like Accidents are diminished, Asses and Goats-milk may be necessary; yea a Diet of Cows-milk alone, or mixed with distilled Milks, and sweetned with Conserve of Roses. But this will be work for the Physician, when they come ashore. Many Instances may be given of Gun-shot in the Breast: But few do recover that are shot into the Lungs.

Observat. At the Battel of *Worcester* there was one brought to us shot with a Musket-bullet through one side of the *Sternum*, which passed out between two of the Ribs on the other side, without any visible Symptom of danger. We dressed the Wounds with a Digestive dipt in *ol. lumbric.* warm, and kept the lower Orifice between the Ribs open for discharge of the Matter, it being the depending Orifice. He was let blood, and prescribed Pectorals, &c. as occasion offered. His Wound digested, and was afterwards deterged with *mel. ros. sar. &c.* After our Defeat he was dressed by *Will. Clarke*, now of *Bridgnorth*; and, as I have been since informed by him, was concealed by some House-keeper until he made his escape.

Observat. From the Defeat of the *Scotish Army* near *Dunbar* there came many of the wounded to *Saint Johnstons*, and amongst them there were several wounded into the Breast. They who were so shot as to have the Ribs broken, were in extream Pain from the Shivers: Whereas the rest whose Bones were not hurt had scarce any Pain at all, but what proceeded from difficulty of breathing; they all coughing up a stinking *Sanies* both before and after the separation of the Sloughs. One of them cought a very great proportion daily of thin Matter, of a brown colour and rank smell. None but this died under my hands; the rest after some while retiring to their homes, were (as I have often heard them say) their Leeches performed great Cures, by virtue of some Plants which they gave internally, and which with Fats they made Balsams of: Yet I believe this man died tabid.

C H A P. IX.

Of Symptoms of Gun-shot, (omitted in the Fourth Chapter.)

TH E Symptoms attending Gun-shot are Pain, *Phlegmon*, *Erysipelas*, Fever, *Delirium*, *Syncope*, Gangrene, Convulsion, and Palsie. The Pain occasions Inflammation, whether it be *Phlegmon* or *Erysipelas*, of both which I have elsewhere purposely treated. But that of Gangrene I thought fit should accompany Gun-shot, they of all Wounds being most subject to it. The Fever is Symptomatical, so is the *Delirium*, and will go off with the Pain; but may, with the forementioned Inflammations, be relieved by Bleeding and lenient Purgatives, such as I have mentioned. And to fortifie the Spirits against Fainting, which proceeds from putrid Vapours affecting the Heart, there are Cordials and *Epithemata* already prescribed. So that there remains only Convulsion and Palsie to be here treated of.

Convulsion is, An involuntary Contraction of the Nerves to their Original, by which Contraction the Member is also drawn up; and it is said to be caused by Repletion and Inanition. In this our case it ariseth from putrid Vapours, or acrid Matter offending the Nerves, which is often found in these Wounds. The Part affected is the Brain, which being thus provoked causeth an involuntary Contraction and Rigidity in Parts dismembred, as near the Knee or Shoulder. There the Contraction cannot be discerned but by a Trembling, which Trembling is usually attended by a Convulsion of the Joynts. It likewise follows upon great Inflammation, especially in the Nervous Parts. The Prognostick here is always fatal, a Convulsion upon a Wound being the fore-runner of Death.

In the Wars I was called to see a poor Soldier, who had his Arm shot off near the Shoulder. The bruised and shattered Stump seemed to his Chirurgion to be gangrened, and accordingly he dressed him with *Ægyptiac*. as a Gangrene: From which sharp dressings the Wound gleeted, and, by reason of the Pain, inflamed. He had roared some days thro' the vehemency of that Pain. When I came to him, I saw a great Trembling of the Part, and a frequent twitching upwards of the Tendons and Musculous flesh in the Stump; also the flesh in the whole Stump was of a whitish colour, as if it had been scalded. I dressed him up with Anodynes, as *Liniment. Arcei cum vitell. ovi*, and fomented the Part with *fol. malvar. violar. thaps. barbat.* decocted in Milk, embrocating it *cum ol. lumbric. & ex ped. bovinis*, and applied *empl. diapalmæ cum succis* over all; then anointed the Parts about, as the Neck and Spine, with *unguent nervin*. I also blistered the Legs and Thighs: But it was too late, he died howling.

Paralysis is generally defined, a privation of Sense or Motion, or both, in some Part or Parts, and affects the Brain and *Spinalis medulla*. But in Palsies which arise from Wounds the Parts immediately affected are the Nerves of that place only. This doth not take away the life of the Patient, tho' it may sometimes threaten a Mortification thro' defect of natural heat in the Member.

In a Sea-fight an *Irish* Mariner having discharged his Gun, which was Honycombed, and loading it suddenly again, whilst he was ramming in a Cartridge; the Powder took fire, and shot the Rammer out of his hand, tearing the Palm of his hand, also some of his Thumb and Fingers. The wound was not considerable, but the force of the Blow extinguished both Sense and Motion of the Member. I dressed him up with our common Suppurative, (of which at such times we have great quantity ready,) and applied over all a common Restrictive, so rowled it up, there being then no time for Bleeding him. But after

after the Fight I let him Blood, and a day or two after purged him, then fomented and embrocated the Member with *ol. lumbric. cham. anethi, lilior. unguent. nervin.* and such like, and did all that we Chirurgeons of the Squadron thought fitting; but without success. One night after he was cured of his wound, lying asleep in his Hammock, he was wakened by the wet he felt upon his Breast and Belly; and getting up to a Candle, he found the Dressing upon his Hand all bloody, as also the Place whereon it lay: I being called took off his greazy Dressings, and found the Palm of his Hand and Fingers gnaw'd by Rats. They had eaten through the oiled Cloths, and had gnaw'd his Hand more, if he had not wakened by the trickling of his blood. I dress'd his Wounds with Digestives to hasten Suppuration, supposing the discharge of Matter might contribute to his Recovery. After I had cured them, I made him a Fontanel in that Arm, and bathed the Member frequently, also cupped and scarified it; and afterwards applied Plaisters of Pitch, to stir up a heat in a Member. He was a young man, and otherwise of a strong Constitution, and was not over solicitous to have it cured, as designing to make some profit by it. To which purpose he took an opportunity of landing, and hastened away to *Madrid*: where having gotten some reward for his service, he returned to the Navy, and had more use of his Arm.

Paralysis doth often happen in great Contusions and Luxations; of which more elsewhere.

A N

A P P E N D I X

To the Treatise of

Gun-shot Wounds.

To the Reader.

HAVING thus finished the Treatise of Wounds, I considered with my self that my Design was to help the Sea-Chirurgeons, who seldom trouble their Cabbins with many Books. I therefore thought it convenient to make this as comprehensive for their use as I could, by comprising in it all those things which may easily be foreseen to be of use to them in other cases besides Wounds. We know by our experience, that Burning by Gun-powder and other materials do too frequently happen at Sea; and also, by ill Dressing of Wounds, Gangrenes and Fistulæ arise, and that much the sooner, if broken Bones especially those with Wounds, be not well brought together, and so held. All which matter we occasionally handled in the foregoing Work: Yet not so much, but that, for their farther Instruction, I thought it requisite to anticipate something of other Discourses which I intend for the Press, by the following Appendix; which if well perused, may perfect the Chirurgeon in what remains to be known concerning Wounds, and save him the labour of reading many Authors.

C H A P.

C H A P. I.

De Ambustis, or, Of Burns with Gun-powder, &c.

FOrasmuch as it often happens, that in close Fights at Sea, Men are sometimes burnt by Gun-powder by their Enemies, and by various Accidents amongst themselves; I shall therefore deliver to you the most plain way of curing them. For, however people cry, It's nothing to cure a Burn: Yet by what I have seen of these Cures from Country or City they are often very ill performed. Whether they are burnt by Gun-powder or any other way, their Cure is much alike, they only differing *secundum magis & minus*. Only if they be burnt with Gun-powder, they must pick out the Powder first; else they will carry the same blue Mark, if it be in their Faces, which some people use to do in their Hands and Arms, which I have often been employed to take out, when done wantonly in their youth; but could never remove them otherwise than by taking off the Skin.

If the Burn be superficial, it raiseth the *Cuticula* up in Blisters: If it go deeper into the Skin, it causes an Eschar: If it burn deeper into the Flesh, the force of the fire makes a hard Crust with a Contraction. In all these the Pain is excessive.

Once as I was dressing a gangrened Leg with warm Spirits of *terebinth*, &c. Mr. *Arris* and Mr. *Hollyer* Chirurgeons and others being close about me, and I upon my Knees, the Candle being too near the hot Spirits catcht the flame, and burnt my Thumb and Fingers before I could get free from those behind me to throw it into the Chymney, which was some distance off. I felt much more Pain for the while in the superficial Scalding, than where it was burnt to an Eschar.

The Indications of Cure are of two kinds: *viz.* either by Refrigerants to bath or anoint the Part, untill the Heat be off, and the Eschar separated, and then to digest and cicatrize; or by calefactive Medicaments to relax the Skin, and resolve and dissipate it, which by accident will assuage the heat and Burning. The Refrigerants are, *aq. solani, plantag. hyoscyam. lac ebutyratum*; and all the cooling Juices and Unguents, as *unguent. album, nutritum, populneum, rosat.* &c. These must be used warm, untill the Heat and Pain cease, or the fire be taken out, (as the common expression is;) else they will rather cause Pain. Hot Medicaments assuage the fiery Heat and Pain by Rarefaction. Which in the first place may be done by the holding a burning hot Iron or fire to the Part: so while the fire calls fourth that Fire it made, it becomes its *Alexiterium*. But the common remedy is to apply Salt and an Onion beaten together. But this is not to be done after the Blisters are risen, nor by any means where the Part is raw; for so you will exasperate the Pain, and increase the Inflammation. There are many other things do extinguish the Fire. *Fimus equinus* doth it, fried in *ol. nucum, uvæ immaturæ, sambucus*, and *ebulus* in *oleo coct. calx viva extinct.* & cum *unguent. rosaceo mixta ad consist. unguenti.* These are to be renewed often, untill the Pain and Heat be off, which they in few days affect. If these Applications do not prevent the rising of *Vesiculæ*, you must cut them as they rise, lest by their erosion they make hollow Ulcers, and inflamed with sharp Pains, Fever, &c. But where they are burnt to a Crust or Eschar, you must hasten its fall with Emollients, then digest, incarn, and cicatrize.

Here is required Bleeding and Evacuation by lenients: but if there be *Caco-chymia*, Regiment in Burn.

chymia, you must purge more powerfully. A spare Diet is requisite, with all other Regulation proportionably according as the Burn is greater or less. I shall give you for your farther information two remarkable Instances of Burns: the first in the Wars, occasioned by Accident thus.

1. Observation of burning with Gun-powder.

A Souldier in the time of service being in the Fort-Royal at Worcester, hastily fetched his Bonnet full of Gun-powder; and whilst he was filling his Bandeliers, another Souldier carelessly bestrides it, to make a Shot at one of the Enemies which he saw lying *perdue*. In firing his Musket, a spark flew out of the Pan, and gave fire to the Powder underneath him, and grievously burned the Hands, Arms, Breast, Neck, and Face of him that was filling his Bandeliers. And as to himself, he likewise was burned and scorched in all the upper part of his Thighs, *Scrotum*, the Muscles of the *Abdomen*, and the Coats of the Testicles to the *Erythroïdes*, so that the Cremasters were visible. And indeed it was to be feared, that, when the Eschar should cast off from his Belly, his Bowels would have tumbled out. We dressed the several Parts of them both with *mel saponis*, and embrocated the Parts about *cum ol. ros. & albumine ovor.* beat together, and let them bleed. I did not see the issue: but *William Clarke* who was then one of my Servants, and assisted me in the dressing them, staid there, and attended their Cure, after the Defeat of our Army. And he lately told me, he cured the latter of these with *unguent. tutai*, &c. and the former made his Escape out of Town.

2. Observation of a Burn with Gun-powder.

A young Gentleman of about ten years of age, boarded at a School a few miles off, the Evening before the fifth of November having filled his right Pocket full of Squibs and Crackers, threw one of them into the Chymney amongst the Embers. It took fire: but whether it scattered the Fire, and some parts of that flew into his Pocket, or whether it was the Cracker, but those in his Pocket took fire also, and his Cloaths burnt. At the sight whereof his little Chamber-fellow ran out for help. In his absence a little Boy from some other Apartment took the alarm, came in, and seeing his School-fellow in a flame, catch up a Bason of water, and threw it upon him; then ran away for help. Others came in and rescued him out of his burnt Cloaths. A neighbouring Chirurgeon was sent for, who dressed him. The next day they brought the Patient to Town. I found him burnt into the Flesh from a hand's breadth below that Arm pit down that Side, with part of his Belly, and from thence it spread down to the *Os ileon* and *Glutens*, and along the Thigh almost to the Knee. And by endeavouring to free his Pockets of the Cracker, he also burnt his Hand from the fingersends along the side of his Arm to his Elbow-joynt. The Parts which were burnt to an Eschar I anointed with *mel. cum succo cepar. & pulv. iridis* mixt, and fomented the Parts about with a Decoction of *hyoscyam. malvar. solan. violar. sem. cydon. psyllii*, adding to it a third part of *lac ebutyratum*, and embrocated the other Parts with *unguent. stramon.* He should have been let blood, but would not. Clysters were admitted, and Pearl Juleps and Ptisans prescribed, his Fever being very great by reason of the Pain. As the Blisters arose, we snipt them. Those which were raw I dressed with fine Lawn dipt in the foresaid Decoction; and with a Feather dipt in *unguent. de stramon.* mixt with *ol. amygd. dulc.* anointed the Lawns: by which means those places which were superficially burned healed. As the parts deeper burnt threw off their Eschars, I digested them with the Yolk of an Egg and a little *terebinth. lot. in. aq. solani*, adding some *farin. hord.* finely searsed *cum. ol. amygdal. dulc.* Upon others I applyed *unguent. diapomphol.* and anointed the fretted edges with *unguent de stramon.* To others I used *unguent. album campb.* mixed *cum albumine ovi.* Thus each Part required to be particularly considered, and special

Special care was taken that no Matter should be any where pent in. In these large Burnings there are required variety of Intentions at one and the same time. Some require Anodynes, others Detergents and Digestion, others Desiccants. Some of the Parts require to be drest twice a day; others but once. Some of them I drest with this Unguent: *R. ol. sambuc. lbj. cera ʒiij. litharg. aur. ʒij. cerussa ʒj. calcis lot. ʒvi. thuris & sarcocollæ an. ʒiij. fiat Unguentum S. A.* Upon some of these lawns I laid afterwards Pledgits dipt in a Solution of *troch. abl. Rhas.* made in a Decoction *equiset. ros. rub. & summit. rubi*, to cicatrize them. Thus I happily cicatrized this young Gentleman's Ulcers even and smooth without the least Inequality, nothing remaining but the red colour to make it discernable.

Several indications in a large Burn.

And I must tell you, in these great Ulcers it will require your care that no *Hyperfarcosis* grow upon them, for thereby the *Cicatrices* will be deformed. I have had some persons of good quality come to me so deformed with these, that they have suspected them to be Wenny; and where they have happened upon Womens Breasts, they have supposed them Cancerous. In others, from ill Chirurgery, the loose Flesh hath grown so high and callous, that one of them who came into my hands required to be burnt again in order to his Cure. In the Face there is a special care to be had, as also in the neck and Breast of the Female Sex. A great care must be had likewise of the Eyes, that they be not daubed with greazy Medicaments, and that the Lids be not drest with two drying ones, lest they contract and make a Blearedness. In the Cure of the Eyes you may use Pigeons blood, Breast-milk, *aq. solani, plantag. ros. poma, sem. cydon. fenugr. troch. abl. Rhas. tutia, lap. calam. thus, sarcocoll.* washt or not washt. I have seen the Ears for want of care adhering to the Scalp, also the Fingers to one another, and in others close contracted to the Palm with hard *Callus*. In that case of the Ear, I divided the *Callus* by Incision, and applied soft bits of Linen dipt in *aq. spermat. ranar.* between the Scalp and lower part of it, which was rumbled up. Afterwards I rubbed the unequal *Callus* with the Caustick-stone; and as the Eschars separated, I cicatrized them with the Vitriol-stone, *unguent. desicc. rub. &c.* and left the Part in its natural shape. Where the fingers have been all grown to one another almost to the middle Joynts, I have separated them by Scissors and Knife, and afterwards by the Caustick-stone rubbed the *Cicatrices* off, and healed them smooth.

Medicines for Eyes burned.

A Boy came out of the Country with all the fingers of his right Hand close contracted. I cut the *Cicatrix* of each finger, and caused a Rowlear of wood to be placed under his crooked fingers, which being carried with Barrs to the inward part of his Wrist, and fastned by Screws, thrust the Rowl gradually forward, till it had born all the fingers before it, and by a compleat Extension restored them to their former liberty. The Wrists and other Joynts would be subject to the same inconveniences, if they were not prevented by the working Artift, without whose help the best Medicaments signifie little.

3. Observation of Fingers burnt.

CHAP. II.

Of Gangrene and Sphacelus.

THE most cruel Symptoms that attend Gun-shot and great contused Wounds are *Gangrena* and *Sphacelus*.

Gangrene is a tendency to Mortification: it invades the softer Parts, as the Skin, Flesh, &c. and is the beginning of a *Sphacelus*.

Definition.

H h h 2

Sphacelus

Sphacelus is a perfect Mortification, with the extinction of the native Heat and privation of sense, not only in the Skin, Flesh, Nerve, Artery, but the very Bones.

Difference They differ from one another, as the Mortification is more or less.
Causes.

The *Causes* of Gangrene are various, *viz.* whatsoever destroyeth the natural Heat: as Interception of the motion of the blood by over-strict Bandage in Wounds and Amputations, want of timely extracting of extraneous bodies in Gunshot, &c. from whence Pain and Fluxion do arise; so excess of Cold in hard Winters, also in Old age, and the like. A Gangrene doth arise also in Phlegmons, through the unseasonable application of over-cold Medicaments; or for want of timely Digestion; or by excess of Heat, such as becometh caustical, as we find in Carbuncles and all Eschars. But that which most of all contributes to it is the Degeneration of Humours in unsound Bodies: in some of which not only all great Operations, but even the application of a Caustick, cutting a Corn, or paring a Nail of a Toe to the quick, will endanger Mortification. Some I have seen (you may call them Scorbutical persons if you please) who upon the appearance only of a small black Spot on the Foot without Tumour, have suffered a very quick unavoidable Mortification. But I would not have you therefore conclude every Scorbutical Spot a Gangrene: for this latter lies dry in the Skin without either Inflammation or Pain.

In one of these abovesaid cases, where the Gangrene was stopped by the speedy assistance of Art, an Apoplexy followed in few days after: of which more anon.
Signs. The *Signs* of a Gangrene are, change of the natural colour in the Skin to a pale livid, with diminution of Tumour; Blisters also arise, and the Part turneth black soon after. In Wounds, the Lips sink and are flaccid; a Gleet followeth, and the Flesh within withers; also the Pulse and Sense in the Part do both languish.

Observat. A person having been shot in the Arm, and the Wound undigested, I being consulted advised the laying open of the Wound, and extraction of the Bullet, Rags, &c. but was over ruled by others, and it was deferred to farther consideration. Two days after I visited the Patient, and asked the Chirurgeon whether he had laid open the Wound. He replied, there was no need, for he could turn his finger in it, and pull out the Bullet and Rags, if it was necessary. As I was going out of the house, I met the Physician, who inquiring of me the Patients health, I replied that the Chirurgeon had unwittingly given me the certain sign of his Death. For *in magnis vulneribus & parvis, si Tumores non appareant, ingens malum.* That was a great Wound, and not being digested, should have been accompanied with Fluxion and Inflammation; the Lips should have been full, the Orifice contracted: but on the contrary, the Heat was decayed, the Lips were lank without sense, and at that time *Sphacelated*. A day or two after he died, too certainly justifying my Prognostick.

Sphacelus is distinguished from a Gangrene by the total Corruption and Stink, it being also insensible both of Knife and Fire. If a Gangrene proceed from Pain, the Tumour and preceeding Inflammation will shew it, and the sudden sinking of that Tumour is the beginning of the Gangrene. If the Gangrene be from cold, the Part is first benumbed, then accompanied with a pricking Pain, also a Redness, which by degrees turneth black, and Horror and Rigour seizeth upon the Patient. If it be from Interception of the Spirits by reason of over-strict Bandage, there is neither Fluxion nor Pain, but a Flaccidity joyned with an Insensibility in the Part. If it be from Old age, the Patient is lean, nature visibly decayed, his Legs and other extremities are first seized, and the Part is most commonly without Tumour.

Prognostick. All Gangrenes are dangerous as threatening the Life of the Patient they affect. Those that begin in the external Parts by reason of Inflammation are
of

of least danger, if the Habit of body be tolerably good, and the Mortification timely treated. Those that arise deep within the Wound from Gun-shot or fractured Bones are extremely hazardous, especially if they be in or near the Joynts, though the Habit of body be good.

Gangrenes arising from Parts abounding with too much Humidity are in great danger, for thereby the natural Heat is soon overcome: for which reason Gangrenes in very fat and Hydropical bodies, especially in the latter, are rarely extinguished. So also those arising from an internal cause are exceedingly more dangerous than those that arise from an accidental. Yet in all these there are some hopes of Cure. But in *Sphacelus* there is no remedy, save only by a speedy separation of the sphacelated Part: for if any of it remain, it soon creepeth up by the Nerves, &c. and infecteth the whole Member, and is accompanied with Watching, Raving, frequent Faintings, Convulsions, Hiccough, and cold Sweats; which forebode the Patient's approaching Death in the Treatise of *Tumours*.

In the Cure of Gangrenes, I shall begin my discourse of that which ariseth Cure. from Pain with Flux of humours and Inflammation. These most frequently attend great Contusions, Gun-shot Wounds, &c. and by suffocating the native Heat produce Mortification. In which cases a cooling and slender Diet ought to be observed: the Humours abounding in the body must be evacuated by Bleeding and Purging: Revulsion ought also to be made to avert the Humours from flowing to the diseased Parts. For the rational performing of which I refer you to the Chapter of a *Phlegmon* in the Treatise of *Tumours*.

Cordials and Epithems are also necessary, to resist the Putrefaction, and strengthen the vitals, from what cause soever the Gangrene ariseth. For your choice of which I refer you to the Chapter of a *Carbuncle*, which is another sort of Gangrene. Having thus provided in general, we shall in the next place consider the Part affected, whether it be only a Tumour, or a Wound with a Tumour, &c. In which latter, if the Tumour and Inflammation have been very great, and it change colour suddenly, and sink, the Pain continuing, you may conclude a Gangrene beginning. And if there be a Wound or Abscess, and that Wound, &c. grow more painful, if the Flesh also lose its ruddiness, and look pale and withered, and the Matter change to be thin and gleety, you may suspect it corrupting: in which case it will be necessary that you scarifie to the quick, and make it bleed freely. By your Patients sensible feeling, and by the fresh trickling down of the blood, you may judge of the Mortification. But if the Gangrene have crept deeper, or arose from the bottom of the Wound, then scarifie accordingly unto the fleshy Parts: and if there be any Abscess lying under the Muscles or Lips of the Wound or Ulcer, let it out. If in making such Scarification you chance to cut some Vessel, whereby a Flux of blood happeneth, have a care you choak not the Heat of the Part by crowding in Dressings; for so the Mortification may be encreased. To avoid which, I do rather advise the actual Cautery, for thereby you will not only stop the Bleeding, but dry up the Putrefaction. After the use of it, dress up the Wound as hath been advised in the Chapter of Burning. If in scarifying you prick a Nerve or Tendon, you will encrease the Gangrene. So you may do if by the actual Cautery you burn them but in part, or if you apply sharp Medicaments on them when newly hurt by Scarification. For we frequently see great Fluxions arise from little Disturbances of the Nerves and Tendons. Therefore consider well, and if such lie in your way, you had better cut them off or burn them through, then scratch or prick them. For the confirmation hereof, you may see some Instances in the Cure of Ulcers amongst the Nerves and Tendons in the Treatise *de Strumis*. Whilst I was writing this,

I cut off some of them in one Patient: they lying over the carious Bones would not admit of the coverture of a Pledgit without grievous Pain; but those once divided, the Ulcer grew easie. But if you meet with none of these Accidents, then, after Scarification, cleanse it of the clotted blood, by washing it with Brine, a strong *Lixivium* of Wood-ashes, or Tincture of Myrrh, &c. and fill up the Scarification with *Merc. præcipitat. troch. polydæ, musæ*, or with Dossils dipt in *ol. garyophyll. terebinth. &c.* actually hot. *Unguent. Ægyptiac.* is also hereto useful, whether it be that made by the *Pharmacopœia Londinensis*, or by other Authors, with the addition of *sal. Armoniac. nitr. theriac. camph. &c.* The usual Fomentation is a *Lixivium* wherein have been boiled *summit. absinth. centaur. min. cardus benedict. scordium, vincetoxic. rad. aristoloch. rot. rad. gentian. spir. vini, &c.* or that of *aq. calcis*, with a Solution of *Merc. sublimat.* or *aq. lap. medicament.* Cataplasms are also of use *ex far. hord. fabar. lupinor. lentium, pisor. Mithridat. &c.* boiled in a *Lixivium*, with an addition of Oxy mel, &c. While these are applied to the gangrened Part, a good Defensive should be laid upon the Joynt or Parts above; of which you may find choice in this Book.

In the dressing of these Mortifications, you ought to consider well in the application of your Medicaments, that you do not in the extinguishing one Gangrene raise another, by the too long use of sharp Medicaments. Therefore, when you shall feel the Ulcer warm, and find it cease gleeting, it may be reasonable to forbear the use of them, and to dress it up with warm Digestives, as *unguent. basilic. cum ol. terebinth. hot:* and after Digestion deterge with *mundif. ex apio magist.* or such like, according as the Sloughs require; then proceed by Sarcoticks and Epuloticks, as in such Ulcers hath been shewed.

r. Obser-
vation of
a Gangrene
from
strict Ban-
dage.

OF Gangrenes from strict Bandage you may see several Instances in this Book. The Cure differeth not from that of others made by Fluxion: but they are much more hopeful, considering the cause may be so easily removed by the loosening of Bandage. I shall give you an Instance here of a fractured Leg set in the Country by one pretending to Bone-setting. It had been bound up with Splints. About the third day after, I passing that way was desired to see him. The Fracture was of both the Focils of the left Leg. He had been in great pain from the time of the setting: it was extremely swelled from the Knee to the Toes. I saw it was occasioned by the too streight binding. I therefore loosened the Bandage, and took off the Splints, the ends of them sticking in the Skin, as also did the two Ligatures which encompassed the Fracture. Many Blisters were raised, not only about the Fracture, but also about the Foot; some whereof were blew, and others of a dark red colour. I scarified them, permitted them to bleed, and fomented the Member with Stupes wrung out of hot Milk: by which I gave a transpiration to the Humours, then dressed the Gangrene-spots with *unguent. basilic. hot*, and applying an anodyne Cerote over all the Leg, laid it upon a soft Pillow, with *Splenia* of Cloaths under it, which I fastened about the fractured Member; and bringing the sides of the Pillow close to the Leg, it was supported with much ease: then I let the Patient bleed. By this way of dressing, the blood circulated, the Pain accordingly diminished, and so did the Swelling, and the gangrened Parts digested off, and healed by the application of *unguent. diapompholyg. &c.* After the diminution of these Accidents, the Leg was dressed up closer, and the fractured Bones united together, according to the method set down in the Treatise of Fractures; where also you will find a Gangrene arising from Fluxion occasioned by the Shivers of Bones, with the manner of its Cure.

Chap. II. Of Burns with Gun-powder, &c.

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Of Gangrenes arising from Gun-shot I have shewed you sufficiently in the preceeding Treatise, and in the Observations of *Phlegmon* have treated of those rising from Inflammation, to which I refer you; and shall now give you some arising from other Causes, and first from Fluxion.

A Gentleman of a full Body having accidentally broken his Shin by a Fall, the Wound inflamed, and grew very painful. It not yielding to their Applications, I was fetched, and saw the Heat decaying, and Blisters rising about the Lips of the Wound, also a thin *Ichor* dropping from the contused Flesh. I cut out the bruised Flesh, scarified the Wound, and dabbed it with *ol. terebinth*, then fill'd it up with *Præcipitate*, and applied *unguent. basil.* warm with some of the said Oil, and a Cataplasm over all of wheaten Bread-crumbs decocted in Brandy, with the addition of Saffron, Yolks of Eggs, and *mel. communis*; then let him blood, prescribed a Clyster that afternoon, and laid him to bed with an Anodyne draught. The next day I came better provided: but in taking off the Dressings, I saw the Wound dry, and felt it warm, and took notice of a small Escar made by the former Application over it. The Lips of the Wound inclined to a Digestion. I fomented it, and dressed it up with *unguent. basilic. cum ol. terebinth.* and repeated the use of the Cataplasm: by which Dressings the Wound digested, and the Parts about recovered their natural Heat, and he was cured by Deterfives, Sarcoticks, &c. as a hollow Ulcer.

2. Observ. of a Gangrene on a contused Wound.

A Woman came out of the Country to me with an Ulcer in her Leg. It had been of long continuance, and by reason of her Journey it inflamed and swelled. When I saw it, the Heat was decaying, and the Tumour was sinking; Blisters were risen near the Lips, and the Skin under some of them was of a purple, and under others of a blew colour. The Ulcer it self being putrefied, I scarified it and the Parts about so far as I thought necessary, permitting them to bleed freely, and thrust out the rotten Flesh: Then I fomented them with Brine, sprinkled the Scarifications with *Merc. præcip.* and dressed up the Ulcer with Dossils dipt in a Solution of *unguent. Ægyptiac. in spir. vin.* to which I added some of the said *Præcipitate*, and applied a Cataplasm of *medull. panis tritic. pulv. summit. absinth. flor. centaur. ruta. scord. cham.* decocted in Brandy-wine. After I had thus dressed her, I let her blood, and disposed her to rest with a Cordial draught. Her Body was the next day made soluble by Clysters, and afterwards by lenient Purgatives.

3. Observ. of a Gangrened Leg.

At the next dressing I was provided with a Fomentation and Cataplasm, as is proposed in the method of Cure. I scarified again the Lips and Parts about, and designed as much to the Ulcer: but in taking off the Dressings, I felt it warm, and a kind of Escar made by the foresaid Dressing. I therefore dressed it with *unguent. basil.* and *ol. terebinth.* hot, and applied the Cataplasm over all. By these Applications the Ulcer and Parts about were restored to their native Heat, and the Sore digested, and afterwards healed with Sarcoticks, as is usual in such like cases.

A Lady aged about 36 years, of a very fat gross Body, was seized with an Apoplectick fit, which afterward terminated in some kind of Lethargy, with loss of Memory. During which she lying in bed, and leaning for the most part on her Elbow, bruised it, and at length the Putrefaction reaching to the Skin; it inflamed, and seemed to have Matter. Some Pretenders to Chirurgery, judging it a simple Apostemation, thought it not worthy the consulting a Chirurgeon, but opened it, and put in it a Tent with *basilicon*, and left it to an Apothecary to dress by their direction, not forbidding the Patient to lie upon it. It being thus dressed, the Putrefaction within increased, and spread up towards that *Axilla*, and she died of that Mortification before it was discovered by them, so that the Chirurgeon came in only time enough to embalm her.

4. Observ. of a Gangrened Elbow.

A Gen-

5. Observ.
of a sphacelated
Leg.

A Gentleman of about 60 years of age, having been long diseased with an Ulcer in his right Leg about the Ankle, came up to Town, and sent for me. The Lips of the Ulcer were without Tumour of Heat: the Flesh within the Ulcer was livid, and in some parts of a blackish colour, and discharged a glee-ty Matter. Indeed there were all the signs of a *Sphacelus*: yet the Patient talked of going abroad the next morning; and by his other discourse seemed to be somewhat delirious. I fomented his Leg with a Stupe wrung hot out of *Spanish Wine*; and whilst I provided other Dressings, I prevailed with him to send for an eminent Physician dwelling near his Lodging, to whom I represented the condition of the Ulcer, and undressed it in his presence, scarifying the Lips and Parts within, then washed it with *ol. terebinth.* hot, and applied *Merc. præcipitat.* &c. with a Cataplasm *è medull. panis tritic. pulv. summit. absinth.* with *scorc.* &c. decocted in Brandy-wine. The next day a Consultation was held of two Physicians, Mr. *Arris* and Mr. *Hollyer* Chirurgeons, with my self. We took off the Dressings, and found the Ulcer sphacelated, but not much spread externally. The Patient had rested ill, and was delirious, and his Pulse weak. We scarified the Lips and Ulcer, and permitted them to bleed; then fomented the Member, and dressed the Mortification with *Merc. præcipitat.* and applied a Cataplasm as above prescribed. We continued our Endeavours daily: but the Venome spread up and down that side of the Foot amongst the Bones and Tendons. The Physicians prescribed Cordials, &c. but his *Delirium*, &c. increased, and he died before it had encompassed any part of the Leg.

Cold extinguisheth the natural Heat of a Part, and frequently happens to poor people travelling in Frost and Snow. Some Instances I have seen of this Gangrene. The Recovery of them is not very difficult, if timely treated; otherwise they sphacelate, as other Gangrenes do. When any particular part beginneth to decay in its natural Heat, the common Remedy is, to rub it with Snow, and afterwards to foment it with Decoctions of Turneps or of the hotter Plants, such as are usually found in every Kitchen Garden; then to embrocate it *cum ol. lini, rutæ, aneth.* and *ol. terebinth.* mixt with them; and after to lap it up in woollen Cloths. But if any Part be directly gangrened, we scarifie and dress it as hath been said in the method of Cure: If the whole Body be over-cooled, the Cure consists in the using Brandy, *aq. vitæ*, and other good Spirits, *theriac.* and Mithridate dissolved in Wine, and laying the Patient by the Fire, but not too near, or putting him into a warm Bed, and disposing him to sweat.

6. Observ.
of a Gangrene
through
old age.

Of Gangrene thro' deficiency of Heat in Old age I shall only give you one Instance, and that in a person of a very great age. He is yet alive, and kept so by the great Kindness of a noble Kinsman, with whom he hath a good Chamber well furnished, good Firing, Diet, and Attendance. This Gentleman was seized the last Spring with a simple Inflammation about the Ankle without Tumour. Upon notice thereof I went the next day, and saw it turned black 3 Inches in length, and about 2 in breadth. We fomented the Part with a Decoction of warm Plants, to which we added Brandy; then scarified the Escar, and dapped it with *ol. terebinth.* and after dressed it with a Mixture of the same Oil *cum unguent. basilic.* embrocating the Parts about with *ol. lumbricor.* &c. and applied a Plaster *ex theriaca.* Thus the Escar separated, and my Kinsman *Jaq. Wiseman* dressed and cured it. Before this was cicatrized, the inside of the other Leg upon the Ankle joynt inflamed as largely, and turned black: but by the same way of dressing a separation was made of that Escar, and he was cured by my said Kinsman according to the common method of Ulcers: but it was well nigh the work of four Months. Since that new Inflammations have begun to arise more than once, but hitherto have been timely remitted.

From

From an indisposition or malign quality of the Humours within our Bodies Mortifications frequently arise ; insomuch that we can scarce make a Fontanel in some Bodies without running the hazard of a Gangrene : nor indeed can they be kept from Defluxion after they are made, without the assistance of our Art. Instances hereof may be seen in several places of this Book, particularly in the Treatise of *Ulcers with Intemperies*.

A Woman of about 60 years of age, extreme fat, and of a Scorbutick Habit of Body, sent for a Chirurgeon to make her a Fontanel in her Arm. He cut it, and put in a Pea. She discharged him, and dressed it her self. About 10 or 12 days after the Fontanel growing painful, she sent for the Chirurgeon, who seeing it gangrened, sent for me. The impression of the Pea into the Fat before it was digested had corrupted that, and the Parts about were thereby infected. We scarified the Lips, and cut into the Fat I believe above an Inch deep. We dressed it with *ol. terebinth.* actually hot upon an Armed Probe, filled up the Incision with Præcipitate, and applied a Cataplasm of Mithridate. By this method of dressing the Heat was restored, and it digested in few days, and I left it to the Chirurgeon, who cured it.

7. Observ.
of a gangrened
Arm.

In a person of about 40 years of age, I applied a mild Caustick below on the inside of the Knee, to make a Fontanel. The Escar being small, I divided and digested it with little or no Pain ; and the Escar began to separate kindly : but it afterwards grew painful and gleeted, and the Ulcer corrupted very deep before the first Escar separated.

8. Observ.
of a gangrened
Knee.

This happened whilst the Patient dressed it her self with those Dressings I left her Servant, she not taking much heed of it, till she was so lame that she could not stir out of her Chamber ; and then she sent for me, and to my amazement I saw it gangrened. I presently cut out the loose Escar, fomented it with Wine, and dapped *cum ol. terebinth.* hot with an armed Probe, then lightly scarified it in the bottom and edges, and after dapped it again with *ol. terebinth.* filled it up with Præcipitate, and fomented it till I had made a Cataplasm *cum medull. panis triticeï, pulv. summitat. absinth. & scord.* decocted in Wine with an addition of Brandy, Saffron and the Yolk of an Egg, which I applied over it, having first embrocated the Parts about it *cum ol. ros.* Thus in three or four Dressings I took off the Fluxion, and the scarified Lips digested ; but the Ulcer it self lay dry, till the Sloughs made by the Præcipitate cast off by Digestion. From that time it incarned, and being contracted nearer I dressed it with a Pea. It was very remarkable, that whilst the Ulcer was distempered she was free from her other Complaints ; but after it was digested she relapsed into her former Distempers, and lay some days ill of a bilious Colick. In several others I have seen the like in spite of all my endeavours to prevent it. So also in making Fontanels sometimes by Incision in people where there was no likelihood of pressing on a Tendon, I have been glad to throw out the Pea, and heal them up again.

But as people are sometimes subject to Gangrene by making of Fontanels ; so others we hear of that have been gangrened from paring of a Corn or Nail on their Toes. Amongst the Observations of a *Phlegmon* you may see somewhat of it arising from a less cause.

9. Observ.
of a gangrened
Toe.

I was once sent for to a Person of Honour about sixty years of Age. He was of a full Body, and seemingly healthful ; but in his latter years had omitted Exercise, by reason of a Stone in his left Kidney. One morning in making himself ready he perceived a black Spot on the upper part of his Foot leading towards the Toe next the little one. It was no bigger than a Spangle, without Tumour, Pain or Inflammation. It appearing bigger the next morning, he sent for his Physician and Chirurgeon : They cut into it, and

found it insensible. From that time it was rationally dressed; but it enlarged it self amongst the Tendons, and especially toward that Toe, and affected the Bone. I being then consulted, and joyned with that Chirurgeon, we cut off that Toe, and checked the Mortification. After which with much difficulty we extinguished the Gangrene in the other Parts by the various Applications prescribed in the method of Cure, and healed the sinuous Ulcer. During which the Physician purged him frequently, and prescribed an Antiscorbutick Decoction of *sarsa, China, lign. guaiaci*, with the Plants proper in such cases, to dispose him to sweat; which he did some days. One evening whilst he was sweating, I being accidentally present, he told me he felt a numbness in the Balls of his Toes of the other Foot. I looked upon them, and seeing them all black and dry, cut into them, and found them insensible. I supposed they might have been burnt by the Bricks, neither the Patient nor the Apothecary that sweat him having discovered any thing of it before, we concluded from the malignity of the Humour, for they were directly gangrened; and by that method I cured them some weeks after. But three or four days after that he was seized with an Apoplexy about eleven a Clock on Sunday morning. He recovered out of that Fit, but died that afternoon in another.

Actual
Cautery.

Some other Instances I could give of this kind; but this may serve to shew you to what little purpose Amputations are in these cases. But if the Body be youthful, and the Habit of body tolerable, if Gangrenes resist the Applications above proposed, and penetrate more inwardly, you may then attempt them by the actual Cautery. For, according to that Aphorism of *Hippocrates*, *Illi affectus qui medicamentis non sanantur, ferro sanantur; qui ferro non sanantur, igne sanantur; qui igne non curantur, hos existimare oportet insanabiles*; Those Diseases which will not cure with Medicaments, are cured by a Knife; and those which yield not to that, are cured by Fire; and those which will yield to neither, are counted incurable.

The actual Cautery doth indeed not only resist Putrefaction, but corroborates the Part.

Extirpation.

But after all our vigilancy and industry in contriving Remedies to resist the Gangrene, if it does yet delude us, and terminate in a *Sphacelus*. There is then no more need of taking indication from antecedent causes, or changing of Medicines according to the variety of the causes that introduced it. For whether any Gangrene arise from a hot *Intemperies* or cold, moist, or dry, *Sphacelus* is always the same, extinction of the native Heat, and destruction of the Member. The Mortification creepeth on, and not only infecteth the Member but the Spirits to the very Heart, with its corrupt Vapours mortifying the Vessels all along the sound Parts, and leaving the Member immovable, without sense or heat, rotten, black and cadaverous. Wherefore there is nothing more to be thought of in this case but timely Amputation or cutting off the Member; the Cure of this disease not consisting (as I said) in outward Applications, but manual Operation: And what success may be therefrom expected, is much to be doubted. *At satius erit, with Celsus, anceps auxilium experiri, quam nullum*. It is a miserable kind of help; yet it is the determination of all Authors, that in *Sphacelus membrum corruptum abscindendum est*. In this case it becomes the Chirurgeon to acquaint the Friends with this kind of Remedy, and withal to make his Prognostick accordingly. But before we proceed in this Operation, we shall take notice of what some knowing Authors have writ hereof. For in those places where Amputation cannot be made, as in the Buttock, Shoulders, Back, &c.

Fab.

Fab. Hildanus proposeth the use of potential Cauteries applied to the mortified Part, and often renewed, till the last Eschar reacheth to the live Flesh. Yet he condemneth Arsenick, as being venomous, and producing many dangerous Symptoms. It is true, that I my self have often used that method of Cure in *Sarcomata* with good success: But in a Mortification there appear to me many greater inconveniences that attend it. First, from the Caustick it self, as he proposeth it, of Salts: It will melt in the working, and is more disposed to spread in the Skin than penetrate deep into the Flesh. This every young Chirurgeon knows in his making of Fontanels, that he cannot apply a bit of Caustick so little, though he use all his Art in defending it, but that it will have spread much farther than he designed it. Then the separation of such Eschars is too slow to effect the design: And in an ill habit of body such Medicaments are apt of themselves to procure a Mortification rather than Cure. Whereas on the contrary, an actual Cautery answers all Intentions: it not only consumeth the Mortification, but drieth up the venomous Humour, thereby preventing its farther progress; and also communicateth warmth to the languishing Parts, by virtue of which the Separation is much farthered, and by working upon the gangrened Sloughs performed more easily, as you may see in my practice elsewhere. But where Amputation it self is feasible, nay altogether necessary, as in the Limbs, there ariseth a new question, whether it ought to be done in the sound Part, or in the dead. *Fab. ab Aquapend.* adviseth the dead Part within a fingers breadth of the live, (as also do many others.) Then with a Cautery they burn up all the remaining Mortification. Others do perform the Operation with a hot Knife, the figure of which you may see in *Hildanus.* *Aquapend.* speaks so confidently of his success in the practice of this way, that utterly to deny the thing were to give him the Lye. I shall only make this Objection, that the *Sphacelus* doth seldom affect the Member so equally round, as that an Operation in the dead Part is feasible: Nay, which is worse, when once the Mortification seizeth on the great Vessels, it runneth up so fast under the Skin, that before any considerable part of the Member is outwardly gangrened on the one side beyond the Knee or Elbow, the other side will have reached to the *Inguen* or *Axilla*. This I confess frustrates all manner of Amputation, whether in sound or mortified Parts. Yet generally speaking, the Gangrene doth not grow so fast, but that if you make Amputation two fingers breadth, more or less, within the live Flesh, you may prevent it; and that far better than it is possible to be done by the other way of operating. For if you work there by actual Cautery, with a hot Knife, your Knife will stick fast in the Flesh till the moisture be wholly dried up, and then you must repeat many Knives and Cauteries, in every one of which you will meet with the same inconvenience: Yea, before you can cut through with your hot Knife, it is very probable that you will near the Bone meet with some Parts that are alive and sensible, especially when you come to the *Periosteum*; (for the Membranes do not usually corrupt at the same rate of swiftness with the Flesh;) and then all your pains and trouble will be as great or greater than if you did it in the sound Part. As to the other inconveniences, I shall refer you to *Hildanus*, who hath taken pains in confuting this Opinion.

Both these ways of Amputation seem to me much more difficult and painful than our common way; which makes me presume they proposed them to prevent the effusion of blood.

But modern Chirurgeons have answered this Objection by good Bandages and Deligation of the Vessels, and when we cut above the Knee, by clapping Cauteries to the Vessels only; which sufficiently answers that Intention. Thus

have I seen in my first Sea-Voyages Amputations made above Knee, and afterwards practised them with great ease and safety.

The manner of performing Amputation.

Now since not only in this Chapter of Gangrene, but frequently elsewhere in this Book, we have mentioned Amputation, I think it necessary to take this occasion of shewing the manner of performing it; the rather, because the Operation is much the same, whether it be done upon the account of Gangrene, or for other reasons. I shall therefore in general terms insert the whole Doctrine of Amputation, though briefly, not mattering whether the Examples instanced be *Sphaceli* or not, all Instances being alike instructive.

What is to be considered in heat of fight.

In heat of Fight, whether it be at Sea or Land, the Chirurgeon ought to consider at the first dressing, what possibility there is of preserving the wounded Member; and accordingly, if there be no hopes of saving it, to make his Amputation at that Instant whilst the Patient is free of Fever, &c. Therefore that you may the better make your judgment of the Wounds, I shall give you some few Remarks of such as require Amputation: *viz.* If a Leg or Arm be shattered by Splinter or great Shot, the loss of Substance will direct you. If the principal Muscles be torn off, and the Bone fractured in pieces, or if the Wound be with Musket-shot in the inside of the Joynt of the Elbow, or in the Knee or Ankle, with a Fracture of the Bones of the said Joynt, nay, supposing it hath not fractured them, yet if the Bullet be so lodged that you cannot extract it, you shall then presently make Extirpation of the Part. If it be the Arm, cut it off in the place where it is so shattered, and saw off the end of the Bone smooth, your Assistant the while pulling up the musculous Skin and Flesh. If the Ankle be thus maimed, you shall then cut off the Leg within three or four fingers breadth under the Knee, in regard so long a Stump would be troublesome. But if the Leg be shattered off by the Calf, do not put your Patient to the pain of new Amputation for the shortning it a hand's breadth or a little more. Save what you can of a shattered Hand. And if the Toes with part of the Foot were shot off, cut off the lacerated Parts smooth, but with care to save as much of the Foot with the Heel as you can; it being much better than a wooden Leg. But if the Arm or Leg be not so shattered, though the Wound be large on one side and hang gaping down with great Fracture of Bones, yet be not discouraged, the largeness of the Wound will make for your better pulling out those extraneous bodies, Shivers, Splinters, Rags, or ought else, and for the easier discharge of Matter, Dress it as a Wound by a Splinter.

If the great Joint be so shot by Musket-bullet, that you think it not reasonable to cut off the Member, be sure you make Extraction of the Bullet, and free it of all extraneous bodies, leaving not the least Shiver to prick the Nerves or Tendons: And make such way presently, that you may be able to dress the wounded Nerves, Tendons, &c. without making new Incision, when the Part is inflamed and unfit for it.

If after some days the Wound do not digest, but inflame and gangrene, and the Gangrene do not yield to your Applications as hath been proposed in Gangrene; then, as in a *Sphacelus*, you are to proceed with the Extirpation of that rotten Member while the Patient is free from *Delirium*, and hath strength to bear the Operation.

Seat him so as it may be for your conveniency. At Sea they sit or lie, I never took much notice which; nor do I remember I had ever any body to hold them; but with the help of my Mates, and some one or two that belonged to the Hold, I went on with my work. At *Sterling* I made an Amputation above the Knee, and had as little help; besides my Servants, there was only

only a Sea Chirurgion assisting me. We stoppt the Flux of blood by actual Cautey, and the Wound digested and cured without any ill Accident. Yet where we have convenience to proceed more formally, we always place the Patient to our most advantage, where he may be held firm, and in a clear light, and so that our Assistants may come better about us. The Member is to be supported by some one, whilst another standeth behind the Patient, and draweth up the Skin and Musculous flesh. Then make your Ligature two fingers breadth or thereabout in the sound Part; so that if you amputate in case of Mortification, you may be sure to quit your self of it. This Ligature is omitted by many of our Chirurgions here in this City, they only making a turn with a Tape, pinning it on as a mark to circumscribe by: And instead of the Ligature I propose, they make a Gripe, which Gripe is commonly made by some assistant who hath strength to do it. Indeed this is good, where a shattered Member is to be cut off, to smooth the Stump; in which case there is no great fear of Bleeding. But in Amputations it seems to me to be very inconvenient: For I never yet saw any man so gripe, but that still the Artery bled with a greater force than was allowable; yea, when Mr. Woodall griped, who was so applauded, and in truth made for the work. It being so, in what a huddle is the Stump then drest? But suppose the uneasie posture and the long griping tires the Griper, or that his Hand be cramped the while, what condition is the Patient then in? Whereas by this ancient way of Ligature the Vessels are secured from Bleeding, the Member benumbed, and the Flesh held steady, ready to receive the impresson of your crooked Knife, (or Razor, which I have often amputated with.) This Ligature made the Assistant strengthens it, whilst he draws up the Musculous Flesh. In the mean time the Operator, with a sharp crooked Knife, by a turn with his hand cuts the Flesh off round to the Bone; then with the back of it he scrapes the *Periosteum* from the Bone; if there be two Bones, then with a dividing Knife he separates the fleshy Membrane from them. The Bones freed of the *Periosteum*, Guido proposes a linen Cloth, and *Hildanus* a kind of Purse, to be brought over the upper divided Flesh, to pull it upward, and make more way for the Saw. But I think that needless. The Flesh divided, the Parts separate enough of themselves, besides the Assistant's pulling up the musculous Flesh and Skin is sufficient. That done, you are at liberty, whether you will cauterize the Vessels by a Button cautey, or by Ligature stop the Bleeding, or by Agglutination. The use of *Chalcanthum* I do not approve. To apply Escharotics to the end of the Nerves and Tendons newly incised, causes great pain, weakens the Part, and makes way for Gangrene; it not being likely you can so apply them to the Artery, but that you must burn the Parts about, which are, as I said, the Nerves, &c. The way *Hildanus* proposes, by drawing the Vessels out by a *Forceps*, is not a work to be done in the heat of Fight, nor without a clear day-light. If you attempt it on Land, his Arm should be bowed, and his Leg stretched out, that the Vessels may be the longer after Extirpation, that you may the better take hold of them. *Ambros. Par.* proposes a more easie and sure way of Deligation, by passing a Needle with a strong twisted Thread through the Skin near the great Vessels, making your Stitch over the said Vessels by piercing through the raw Flesh and Skin: Then make your Ligature upon a fold of a Rag. Thus you bind the Artery and Vein. These several ways have been practised by eminent Chirurgions for the stopping the blood of the Arteries in Amputation: But the late discovery of the Royal Stiptick hath rendred them of less use. But in heat of Fight it will be necessary to have your actual Cautey always ready, for that will secure the Bleeding Arteries in a moment, and fortifie the Part against the future Putrefaction: they require

require after Cauterization no such strict Bandage as that thereby you need to fear interception of the Spirits. When we cauterize the Artery, we do then touch the end of the Bone, it hastening the Exfoliation. The next thing is the loosening the Ligature, and bringing the Lips close over the Stump. Then whether you should with a cross Stitch hold them so, or content your self by Bandage as well as you can, is by some controverted. They that object against the former, say it causes Pain and Inflammation. So doth Bandage also: if it be made too streight. Therefore they should object against that also. The most that I have seen without the cross Stitch have the next dressing been broad Stumps, some of them with Lips turned outward by the Bandage; in the least of them the whole Stump hath been bare: Whereas in those in which I have made the cross Stitch, the Lips have been found close to the Bone at the next dressing covering the great Vessels, and a third part or half of the Stump hath been well digested, and by the second dressing hath been near agglutinated so far as it lay under that Skin, and without Inflammation happily cured. Whereas the broad Stump is a certain sign of a long Cure, and commonly the death of the Patient. The exposing these incised Parts too much to the Air causes Pain, and the want of native Heat makes them gleet: Or if they do digest, the discharge of so great a quantity of Matter commonly exhausts the Spirits of the Patient. If the musculous Flesh and Skin are well pulled up in time of Amputation, and brought over by a moderate extension as far as they will easily admit, you will find it not painful. You ought to pierce the Skin with a Needle and strong brown thred ceared about half an inch from the edges of the Lips. Having made them cross from side to side equally, tie them with a moderate Astriction, then apply a Pledgit on the cauterized Vessels with *pulv. irid. succ. cepar. cum melle.* But if no Cautey was used, then Buttons of Tow spread with your Restrictive, and dipt in *pulv. Galeni*, must be applied to the Mouths of the Vessels. Afterwards sprinkle the Stump thick with this Powder; *R. bol. Armen. farin. volatil. picis naval. an. ℥iiij. aloes, thuris, mastich. sang. dracon. an. ℥j. gypsi ℥jss. pil. lepor. corii raspati, an. ℥iij. Misc. S. A.* You may mix some of the same *cum album. ovor.* and apply it upon a thick round Stupe, which hath first been wet in Oxycrate and dried; and over that another Stupe spread with the same so broad as to come over the first, and up a pretty height about the Stump. This latter must be snipt deep in the edges, that it may lie smooth about the Member. An Ox-bladder ready cut and wet is to be turned over it, and a cross Cloth next the Bladder, to hold the dressing steady. Then with a Rowler with two heads begin upon the Stump, and rowl up to the next Joint, and so again about the Member, to retain your Dressings firm. Then fasten it so as that it may not be capable of falling off. But before you make this Bandage, you ought to apply your Defensative over the Parts above the Stump. So apply it before they begin the Amputation: But then it is apt to wrinkle, and to fit uneasie. In the dressing of the Stumps, you ought so to apply your Medicaments, that you may without much bungle rowl up the Member. Then place it to the ease of the Patient, one holding his Hand some while upon the Stump. Your Defensative may be of the same which is prescribed in Gun-shot Wounds: or, *R. far. hord. bol. Armen. an. ℥iij. sang. dracon. ℥jss. flor. ros. rubr. balaust. nuc. cupress. pulv. an. ℥vj. acet. ℥x. album. ovor. num. viij. ol. ros. & myrtill. an. ℥j. cere. q. s.* Boil these Powders in *acetum*, then add the rest to it, to make it of the consistence of a Cerote. The third day take off the Dressings; and then you may cut the cross Stitch, and sprinkle the Wound with *pulv. Galeni.* and dress it with this Digestive: *R. terebinth. lot. in decoct. hord. ℥iij. ol. lumbr. ℥jss. gumm. elemi dissolut. in predict. ol. ℥ss. farin. hord. cribrat. ℥ij. vitell.*

unius ovi, croci pulv. ʒj. Misc. And apply to the Bone a Pledgit of dry Lint, or prest out of *Spir. vini*, after the Wound is digested; you may deterge with *mundif. Paracels.* or *apii*, or this; *R terebinth. Venet. lot. in spir. vin. ʒiij. pulv. rad. irid. aristoloch. rot. sarcocoll. thuris, mell. ros. an ʒj.* Then incarn and Cicatrize, as hath been said in Compound Wounds.

Whilst I was a Prisoner at *Chester* after the Battle of *Worcester*, I was carried by Col. *Duckensfield's* order to a man that out of much zeal to the Cause, pursuing our scattered Forces, was shot through the Joynt of the Elbow; the Bullet entring in at the external part of the *Os humeri*, and passing out between the *Ulna* and *Radius*. He had been afflicted with great Pain the space of six weeks. I found the Wound undigested, and full of a loose soft white Flesh, the Bones fractured, and not likely to unite, many Shivers lying included within the Joynts, and incapable of being drawn out: The lower part of the Arm was œdematous to the Fingers ends as full as the Skin could well contain, and the upper part was inflamed, also about the *Os humeri* and *Axilla* a perfect *Phlegmon* was formed. The Patient thus tired with Pain, desired to be cured, or have his Arm cut off. To which purpose he had procured the Governour's leave for my staying with him. But while that *Phlegmon* was upon the upper parts, there was no hope of a prosperous amputation, nor of Cure while those Shivers of Bones lay pricking the Nervous parts within the Joint. The *Phlegmon* was too forward for Repercussion, and yet not likely to suppurate in less than a week's time. Wherefore I endeavoured by Emollients and somewhat Discutients to succour the grieved Shoulder and Parts thereabout by hindring the increase of the *Phlegmon*, and to give some perspiration to the Part. Then with good Fomentations I corroborated the weak and œdematous Member below: To which end I also raised his Hand nearer to his Breast. Also by Detergents and Bandage I disposed the wounds and fractured Part to a better condition, made way for discharge of Matter, and endeavoured to extract the Shivers of Bones; then applied Medicaments to remove the Caries. After some days the Abscess suppurated in the upper part of the Shoulder and in the Arm-pit; and while the Matter discharged from thence, the Tumour discussed, and that upper Orifice cured soon after. But the continual Pain in the fractured Joynt kept that opening in the *Axilla* from healing. The Patient growing weaker, and without hopes of Cure, I was necessitated to proceed to Amputation. To which purpose I sent to *Chester* for Mr. *Murry* a knowing Chirurgeon, (since Mayor of that City,) to come with Instruments and other necessities whereby I might the better do the work. He accordingly came, and we prepared Dressings ready; which were Stupes or Pledgits of fine short Tow well workt, some like *Splenia*, others were round, and bigger or less. We wetted them all in Oxycrate, and dried them. We also made some Buttons of Tow, Compresses of linen Cloths dipt in Oxycrate, three or four Rowlers with one or two heads; provided Needles threaded and ceared for making the cross Stitch, and lesser Needles threaded for common use, with Filleting for Ligature, and Bladders ready cut and wet in Oxycrate; also a defensative of the above-mentioned prescription spread upon a soft linen Cloth, to apply upon the Parts above more distant, and a Mixture of the Astringent Powders with Whites of Eggs, to spread upon the *Splenia* and Buttons, which Buttons were also dipt in some of the same Powders. Then for the round Pledgits which were designed to be applyed next to the Stump, Mr. *M.* proposed that they might be spread with a Mixture of Umber, and *calx viva* with whites of Eggs, according to Doctor *Read* in his Observation of an Amputation he performed upon a Servant of the Lord *Gerrard's* at *Gerrard's Bromly*, whose fame yet lives in that Country, and will amongst us Chirurgeons as long as his elaborate Lectures have a being.

Observat.
of the ill
conse-
quences of
Wounds
in the
Joint.

The

The *Apparatus* thus made, and the Patient some while before refresh't with a draught of a good Caudle, his Friends took him out of his Bed, and placed him in a chair towards the light. One of his Servants held his Arm; another of his Friends held his other Hand. Then Mr. *Murry* drew up the Skin and Musculous Flesh of the Arm towards his Shoulder, whilst I made a strong Bandage some three or four fingers breadth above the affected Part. Then with a good Knife I cut off the Flesh by a quick turn of my hand, Mr. *M.* pulling up the Flesh whilst I bared the Bones. After which with as few motions of my Saw I separated the Bone, the Patient not so much a whimpering the while. After this Mr. *Murry* thrusting his hands downwards with the musculous Flesh and Skin which he had drawn upwards, I passed a strong Needle and Thread through the middle of the Flesh and Skin on both sides, within half an inch of the edges, and brought the Lips close within a narrow compass: And having tied that Ligature fast, and cut off the String, I passed the Needle again through the two contrary sides, which I tied as close; then loosened the Ligature above, and applied the little round Stupes of Tow spread with a quantity of *Galen's* Powder mixt *cum album. ovi.* The long Pledgits were applied from the middle of the Stump each way upwards along the Arm, over which I put on a Bladder and a cross Cloth, then rowled up the Stump, and made the Bandage under his other Arm and over his Neck. This Bandage prevented an Accident which hath since happened to a Patient here in *London*, where many of the best Chirurgeons were concerned. He being thus drest up, we put him into his Bed. The third day we took off the Dressings, and found the Stump well digested, and at least two Spoonfuls of Matter discharged. We then dressed it with a Digestive *ex terebinth. lot. in decoct. malvar.* the Yolk of an Egg and *ol. ros.* spread on a large Stupe of Tow, on which was sprinkled a proportion of *Galen's* Powder: Then embrocated the Parts about with *ol. ros.* applying *emplast. è bolo* over all, with moderate Bandage, and afterwards deterged with that of *Paracels.* and with Sarcoticks incarnated the Wound. During which the Bone exfoliated, and the Stump soon after cicatrized. Then having procured a Pass to come to *London*, I hastened away.

Observat.

At the Siege of *Weymouth* I was called at break of day to an *Irish-man* of Lieutenant-Col. *Ballard's* Regiment, who shooting off his Musket, it brake, and tore his Hand to pieces after a strange manner. I designing to cut off his Hand, sent presently to my quarters to one of my Servants to bring both Saw and Knife, also Dressings, of which at those times we had always ready. They being brought, I took a red Ribbon from off my Case of Lancets, and bound it about his Arm some four Fingers breadth above the *Carpus*; and having cut the Flesh round off, I bared the Bones, and separated the Flesh between them. Then I saw'd off the Bones, and united my Ligature, and bringing down the musculous Flesh and Skin over the end of them, without making any cross Stitch, I drest up that Stump with restrictives and good Bandage, and returned again to my Quarters. I had not been one hour gone, but I was sent for again to this Souldier, he being (as the Messenger said) grievously pained. I wondred at it, and hastned away: But before I came to his Hut, I heard him crying. I enquiring the cause it was some while before he would answer me. But at last he told me, he was not able to endure that red Ribbon that I tied his Arm with. I was at first surprized to think I should leave the Ligature upon his Arm, that being a sure way to bring a Mortification upon the Part. I therefore put my hand in my Pocket, and feeling the Ribbon on the Case of Lancets, shewed it him. He seemed at first to doubt it; but after he saw it was so, he laught, and was from that time in ease. Two days after, our men were

were chased out of the Town and Chappel-fort. I was at the same time dressing the wounded men in the Town almost under the Chappel-fort, and hearing a woman cry Fly, fly, the Fort is taken; I turned aside a little amazed towards the Line, not knowing what had been done: but getting up the Works, I saw our people running away, and those of the Fort shooting at them. I slipped down this Work into the Ditch, and got out of the Trench; and as I began to run, hearing one call, Chirurgeon, I turned back, and seeing a man hold up a stumped Arm, I thought it was the *Irish man* whom I had so lately dismembred: Whereupon I returned, and helpt him up. We ran together, it being within half a Musket-shot of the Enemies Fort; but he out ran me quite. I afterwards cured him in few weeks by the Method already proposed in the preceeding Discourse.

C H A P. III.

Of Fistulæ.

A *Fistula*, according to the vulgar denomination, is a Sinuous Ulcer supposed to be of two or three months continuance. But to speak strictly, those only are *Fistulae* which are at least of so many years growth, and are accompanied with a *Callus*. Every part of the body is subject to these Ulcers; but especially the Arms, Legs, Thighs and Hips. The worst sort of these, at least that ever I saw was from Gun-shot Wounds with Fracture, where there hath been loss of Bone, or where through long continuance the *Caries* hath chambered the Bone: in which cases the Lips of the Wound and the Wound it self become callous, by keeping them long open in order to the Exfoliation of the Bone, in which case the Lips grow hard, and become thick and inverted. In these the *Sinus's* are more or fewer in number, accordingly as the Abscess or Wound was more or less sinuous.

This *Callus* of the *Fistula* is hastened by the transpiration and resolution of the thin and subtile Humours, and the incrassation of the more pituitous; by the congestion of which a long Pipe of Skin is made, which brancheth it self inwards from the Orifice quite through all the Cavities of the Ulcer; from whence it hath its name. Causes.

The *Difference* of these *Fistulae* are made not only from the Parts affected; as some are in Flethy parts, others in Tendons, or in the Bones or Joynts, or in the Breast, Belly, &c. but also from the figure, magnitude, and number of the *Sinus's*; as sometimes there is only one, then again two or three, crooked or winding till they enter the Bones themselves. Difference.

They are known by the view, and by the touching of the Parts, or by searching with a Probe, and from the discharge of a thin serous foetid Matter, also from the arched Hollowness they have. If by your searching, the Parts are pained, or if blood follows your Probe, the *Fistula* is not confirmed: but if neither happen, then it is. Signs.

All *Fistula's* are hard to cure, and those of long continuance with great discharge of depraved Humours from the *Viscera* are worst. Those amongst the Bones and great Joynts are very difficult to cure, by reason of the Sensibility of the Parts, which for the most part admits neither of Dilatation nor Incision. Those which are in such places where you may safely lay them open, or remove the *Callus*, are more easy of Cure. Prognostick.

The way of Cure is performed either by manual Operation, or by Medicaments. But before you proceed in either, you are to consider that these *Fistula's* are subject to Pain and Defluxion: wherefore you are in the first place

place to proceed by evacuation of those Humours which may disturb you in your work ; and that is done by Purging and Bleeding, good Traumatick Decoctions, with observation of Diet, &c. as is said in the universal Regiment of Ulcers.

To proceed in the Cure by manual Operation, you are to consider the part affected, whether the *Callus* be only in the Lips, or in the *basis* of the *Fistula*, or throughout the whole length of the *Sinus*. And this is discovered, as I have said before, by the Probe, &c. If there be neither Pain nor Matter, and the *Fistula* be tending only down directly to the Bone it will then be best to let it alone, accounting it as an imperfect *Cicatrix*, and that it will in time grow more close : but if it be otherwise, you must then remove the *Callus* in order to the Cure.

If the *Sinus* be in a place where it may conveniently be laid open without Dilatation, divide it with Knife or Scissors the whole length. If after laying it open the *Sinus* be not throughout callous, remove that which is, and heal it according to the common method of Ulcers. But if the Orifice of the *Fistula* be so streight and narrow, that you cannot lay it open, you must then dilate it with Tents of Sponge, Gentian, *Aristolochia*, Eldern-pith, &c. until the *Sinus* be large enough for your purpose. And to further this work, it may be proper that you outwardly apply such Medicaments as may by their emollient and digestive quality resolve and dissipate the Matter impacted in the Parts about it : and these are *rad. althææ, lilior. enule campan. sigill. Solomon. cucumer. agrest. sem. lini, fenugræc. medull. ossium, axung. porcin. axung. human. anseris, gallin. unguent. dialthææ, gum. galban. Ammoniac. &c.* Of these you may make Fomentations, Cataplasms, or Cerots. You have also to this purpose *empl. de ranis cum & sine Mercurio, empl. de mucilag. diachyl. cum gum.* The *Fistula* thus disposed for laying open, you must consider whether you may not remove the *Callus* by Catheticks : to which purpose *Celsus* proposeth *lacr. papaver. Cadmia, atramentum sutorium, ærugo, sandarach. alum.* We commonly use *lap. caustic. Vigon. troch. de minio, arsenicum, ol. chalcant. Or thus : R. cere, resina, an. ʒj. sublimat. ʒij.* or more or less ; mix this upon the fire, and dip a Sponge in it, but not too hot, lest you burn your Sponge : then press it out, and cut it into such a form as may serve your purpose. *Guido* commends *aq. fortis* as most excellent for destroying the *Callus* of all these *Fistula's*. But if you had rather have an Injection, you may make this or such like : *R. unguent. Ægyptiac. ʒß. sublimat. ʒß. arsenic. ʒj. lixiv. sapon. ʒj. aq. ros. ʒij. aq. plantag. ʒv.* boil this *ad tertie partis consumpt.* cast in a little of it with a Syringe three days together, shutting the Orifice up with Wax or some plaister : so shall you consume all the *Callus*. But you must consider well the situation of the *Fistula*, lest by its too far penetrating it hurt the Bone or Parts underneath. After the application of these stronger Medicaments, you must by Lenients mitigate the Pain, and defend the Part from Defluxions, which for the most part attend such Escaroticks. These are, Decoctions of *fol. malvæ, bismalvæ, violar. verbas. hyoscyam. sem. cydonior. bord. or ol. vitel. ovor. butyrum, axung. porcin. unguent. basilic. cum ol. lilior. dialthææ, &c.* And apply over them Refrigerants ; as *empl. è bolo, oxelæum, diapalm. cum succis* ; or some of the Defensatives mentioned in this Treatise. When the Inflammation is repelled, and Sloughs cast off, you may deterge with this : *R. terebinth. in. aq. vitæ tot. ʒiij. succ. apiv. cynogloss. an. ʒv. mell. ros. ʒjß. decoq. ad succ. consumpt. deinde adde rad. aristoloch. rot. pulv. ʒvi. far. lupinor. ʒß.* you may add to it *pulv. ireos, myrrh. sarcocoll. thuris*, and thereby incarn : then cicatrize with *unguent. desicc. rubr. &c.* If the bone be carious, you

ought

ought to consider how far the *Caries* have entred into it, and proceed in the removal of it either by actual Cautery, or Rugines, scraping the Rottenness off: then by Catagmatics hasten the Exfoliation of the Bone, and proceed in the rest of the Cure with Sarcoticks and Epuloticks. But if the *Fistula* be near or over some noble Part, or if there be Nerve, Tendon or Artery near, or if it be in the great Bones or in the Joints, where you may not safely proceed by actual or potential Cautery, and it will not yield to milder Medicaments; you shall do better to palliate it by some Waters and Unguents, which may dispose the Part to quiet, purging the Patient, sometimes, and observing the universal Regiment in Diet, &c.

An Officer of the King's Army laboured long of a *Fistula*, occasioned by a Gun-shot Wound in the upper part of the *Os tibiae* near the Knee, where it had formerly been shattered, many fragments of Bones casting out at times. He had been sometime my Patient in *France*; but here I finished what I there attempted, and had not time to do. After general Evacuation, I applied a Caustick, the whole length of the *Sinus*, whereby I took off that *Callus*, gave vent to the discharge of that foetid *Ichor*, made in the Ulcer, and took out several pieces of the rotten Bone which were shut in there. That done I scraped away the remaining Rottenness, and dressed the Bone with Catagmatick powders, &c. by which means after some time a *Callus* thrust forth, and united with the neighbouring Flesh, which incarnated with the Lips, and was afterwards cicatrized by the common Epuloticks.

Observat.
of a *Fistula*
with *Carie*
in the
Os tibiae.

It often happeneth, that in the time of the Exfoliation of carious Bones, as in Gun-shot Wounds and old Ulcers, while we are attending Exfoliation, the Lips grow callous, so that the *Cicatrix* is deep, and the Lips lie at some distance. In which case heretofore I have taken much pains to smooth them: but have since by experience found, that in time those Lips sink of themselves, and as the *Callus* riseth up to them the *Cicatrix* becometh firm and seemly, without giving the Patient that trouble of removing them by Cautery or Knife.

TREATISE

OF

FRACTURES and LUXATIONS.

The Seventh Book.

CHAP. I.

Of Fractures.

The Office
and Use
of Bones.

A Bone is a similar Part of the Body, and the hardest and driest of all. The general Use of which is *Stabilimentum ac fundamentum reliquis omnibus Partibus largiri*, to be a firm Prop and Foundation, upon the strength whereof all the rest of the Parts are built. The whole *Skeleton* considered jointly, may be looked upon as performing that office to the Little World, that *Atlas* hath been fabulously reported to do to the Great one: it bears the whole bulk of it, and sustains it in all its motions; none of which could be performed, if either the Bones were not, or not so articulated and jointed as upon defection they appear to be. *Nam si ossa abessent, non flecteremus manus, non nervos & fibras.* Nay, if the least Bone be but a little maimed, the use of the Part is hindred. But they are not only *Fulcimenta*, as *Galen* says, *De Usu partium, sed etiam Defensio*, but also a Defence. The *Cranium*, veluti *Galea*, as a Helmet defends the Brain from external injuries. So *Pectus Ossibus clauditur*; the Heart, Lungs, and great Vessels of the *Thorax*, are guarded by a Wall of Ribs. The *Spina* is a Bulwark to the Marrow included in it: and such a defence is the *Os Pubis* and the *Os coxae* and *Ileon* to the Womb and Bladder. Others otherwise serve the uses of Nature. As the three little Bones in *meatu Auditorio*, by firming the *Tympanum*, are a great help to the Hearing: the *Os hyoides* assisteth the swallowing, by managing the Root of the tongue and the *Epiglottis*: the *Rotula* serves the motions of the Knee: and the Teeth prepare the Meat by Mastication. Not a Bone but hath its Particular end set out. There was a reason of the Temper, of the Magnitude, of the Number, of the Substance, of the Situation, of the Connexion of them; the wise *Creator* as much shunning superfluity as deficiency. Indeed, the whole Fabrick is so full of Excellency, that it would take up much time to express it. But that is not my business. The Subject I have undertaken to treat of is their Misfortune: and that is twofold; to be fractured, and dislocated. That of Fractures I have proposed for the first part of my present Discourse; and that only in general, it being sufficient for my design:

Definition
of Fractures.

To proceed methodically, I shall begin with their *Definition* of a Fracture, who, according to *Galen de Methodo medendi*, make it to be *Unitionis sive continuitatis solutio quaecunque in osse*. But this being too general and taking in all Cariosity and Ulcers of the Bones, which hardly belong to this Head of Chirurgery, the Moderns have more closely defined it to be, *Ossis divisio seu ruptura*

ruptura à causa violenter irrudente. But this likewise seems to me to be liable to many Exceptions. I shall name only this, viz. That a Cut made into a Bone by a Sword or a sharp Instrument seems to me rather a Wound than a Fracture. And for this reason *Guido de Cauliaco* makes it to be *continuitatis solutio in osse non à re qualibet facta, sed ab ea quæ contundit.* But I must still beg pardon, if I be not yet satisfied with this Description, because it leaves out all such Fractures as are made by any accidental bowing of a Bone, either in a Wrench, or any other case where, without any Blow or Contusion of Parts, the Bone snaps in sunder, and then wounds the neighbouring Muscles, even to the thrusting of it self very often quite through the Skin. These are (cases of Battle excepted) the most frequent of all Fractures; yet not without some violence to be reduced to any of these latter Definitions. I shall therefore chuse to define a Fracture in the following words; it is a Solution of continuity in a Bone, suddenly made, either by Contusion or Flexure. By contusion I mean, either a Blow by a blunt Instrument, or a Pressure by a great Weight; either of which usually bruise the Flesh about the Bone, as well as the Bone it self. In *Contrafractures* indeed the Bruise is not immediately upon the Fracture, but in the place where the Blow is given. In Flexure there is seldom any Bruise, but what is made by the edges of the Bone it self after it is snapped in sunder. All other Fractures are reducible to these.

The Author's Definition of Fractures.

Amongst the *Greeks* it was commonly known by the Name of *Catagma*, I purpose not to trouble you with the nice Distinctions of Fractures, nor yet with their various Names. *Galen* in his Book *de Method. medendi* complains thus in his time: *Non desunt ex Medicis junioribus, qui ambitiosè omnes Fracturarum differentias propriis nominibus interpretantur;* There want not (saith he) young Physicians who affect to give proper Names to all the several kinds of Fractures: *At non Hippocrates hujus fuit sententiæ;* nor shall I spend my time so, but, according to *Galen*, do take the Difference in Fractures to arise, 1. à figura, 2. à magnitudine, 3. ab ossium fractorum varietate. First, from their Figure: and that it is either right, *quæ fit per longitudinem;* or transverse, *per latitudinem;* or oblique, which is as it were compounded out of the two former. Secondly, à magnitudine, according as the Fracture is greater, or less. The third difference is, *ab ossibus ipsis,* that is, from the Bones themselves that are broken, whether it be the Arm, Leg, Ribs, &c.

Differences.

Causes of Fractures internal there are none, unless they proceed *ab humoribus corporis erodentibus;* and of that sort you may read many in *Schenckius*, *Fabr. Hildanus*, and others. I my self have seen some, and lately. But these, being from Erosion, are rather to be called Ulcers with *Caries*, and therefore more fit to be discours'd of among Ulcers of that kind, to which I refer you.

Causes.

Of *Causes* external there are many; as the too violent Assaults or Stroaks of all external things, which may bruise, break, shatter, or bend. In this number of *Causes* may also be reckoned Falls from on high, &c.

The *Signs* of a Fracture without a Wound are for the most part very evident. The first and most certain is, when in our handling the Part we feel the pieces of Bones severed asunder, and hear them crackle. Secondly, the Impotency of the Member. Thirdly, vehement Pain. Fourthly, a Distortion of the Part. It may also be discovered by comparing the one Member with the other; the fractured being the shorter. But if there be a Wound joined to the Fracture, then if the Bones thrust themselves not forth, yet you may easily know the Member to be fractured, if you search with your finger or Probe. There is also a Curvedness, which may be reduced to a Fracture. I have seen it in Children often, as in *D. C's* little Daughter in the *Old Baily*, and *Mr. N's* Son in *Black-friers*, and others. It is as it were when you break a green

Signs.

a green Stick; it breaks, but separates not: So is cured by a due Extension; with little trouble to the Chirurgeon, or Pain to the Patient after the Extension is made.

Prognosticks.

If the Fracture be *secundum longitudinem*, it will appear first by the unnatural thickness of the Member, then by the Pain and Inequality of the Part. As to the *Prognostick* or Presage, a Fracture of the Bones cannot be without danger: For of necessity the Solution of continuity must be great. If a Wound be made in a Flethy part, it is then proportionable to the Weapon that made it, & *non ultra*: But if the Bone be broken, *propter rigiditatem & continuitatem non potest frangi, nisi totum frangatur*. The Fracture is more dangerous in a great Bone than in a small; and the greater, if both the Bones be broken, as the two Focils in the Leg, or if it be in the Arm, where the *Radius* and *Ulna* are: yet if it happen in the middle of the Bones, it is the less dangerous. Those in or near the Joynt are more painful, and difficultly cured: And if any Shivers press upon the Nervous parts, ill Accidents commonly follow; but of all the Fractures that with a Wound is most dangerous.

Cure.

As to the time of *Cure*, the lesser Bones are perfected in fourteen, eighteen, or twenty five day, the bigger in forty or fifty, according to *Guido*. Yet let me advise you not to be too hasty in taking the Patients out of their Beds; for in some Bodies the generation of *Callus* is very slow, and a new Distortion may happen, and ill Accidents follow. I have been called into Consultation upon such an Accident; the Patient did recover, but lying very long within doors contracted such an ill Habit of body, as was not got off in a long while after.

In the *Cure* of Fractures Union is required: But that cannot be made, unless Pain and Inflammation be prevented. For a Fracture of the Bones is not made without an internal wounding of the *Periosteum* and Parts next to it, whence grievous Pain arises, which stirs up defluxion, and is attended often with great Inflammation; and from the weakness of the Member many Excrements are made and received, which is neither capable to assimilate, nor yet expel. And the mischief is so much the greater, by how much the Bones lie deeper under the Muscles, where they cannot be set, by reason of the great quantity of Flesh interposing between them and the hand of the Artist. The Intention pursued in this case is the Union of Bones, as I have already said, which is not performed by the first Intention, unless it be in little Children, but by the second, *viz.* an intervening of *Callus*.

Intentions of Cure.

The Method I thereto propose is, first, to joyn the fractured parts together; secondly, to keep them so joyned: Thirdly, to preserve the Tone of the Part; fourthly, to generate *Callus*; fifthly, to correct Accidents.

1. Intention.

That the Parts may be rightly joyned together, there is need of Extension, and Coaptation. For in Fractures, especially tranverse ones, the Bones are commonly distorted, the rectitude of the Member lost, some Parts are prominent, and others hollow, and the fractured Bones lying one upon another; and so the Member is made short: & *quia muscoli perpetuo membra trahunt*

Extension

versus suum principium, therefore Extension is necessary, that the Parts which are indirect may be brought right, and the Parts that stick out may be reduced to their Cavities. And although sometimes the Member seemeth not to be short, as if it consists of two Bones, and one broken, or that the fractured bones do not lie one over another; nevertheless you ought to make due Extension in all Fractures, because the Bones never lie exactly equal, and most frequently they ride one over another. The want of which Extension is one reason why the fractured Thigh-bones happen to be so often shorter than they should be, as *Celsus* hath it in these words, *Si femur per-*
fra-

fractum fuerit, breve erit; his reason is, quia nunquam in antiquum statum revertitur. And I find in *Galen*, that *Hippocrates* says the same of the Leg and Arm; and withal tells us, it is so, *nisi ante confirmationem extensio debita adhibeatur, & commodâ deligatione ossium coaptatio servetur.* By which you may observe, the fault is want of good Extension, and keeping the Part in its right seat: For unless that be done, you shall hazard the starting again of the Bones, and thereby the fractured ends may happen to be broken off by mutual Attrition in the act of joyning together: and if those pieces do chance to fall in between the main Bones, they will then hinder their uniting: And if those Shivers slide outwardly towards the Membranes, they will cause extreme Pain. This inconvenience is therefore to be shunned by the help of Extension. But again in Extension there must be observed a mean, as *Vigo* notes: *Ad magnam quidem Extensionem futurus Spasmus valde suspectus est.* Yea sometimes the very Muscles are torn asunder, as *Galen* tells us: And *Albucasis* cries out, *Cave Extensionem vehementem & Compressionem fortem, sicut faciunt multi stolidorum: Multoties enim faciunt Apostema calidum & contractionem in membro.* By which it seems in his time there were such people, who thereby drew sad Accidents, as Convulsions and Inflammations, upon their Patients. But if the Extension be less than it should, then as I said before, the ends of the Bones rub one against another and are broken, or not seated in their proper place. Therefore the bigger Bones having large Muscles, which draw the Members forcibly to their Original, do require the stronger Extension; and such are those of the Thighs, Legs and Arms. And if both the Focils of the Arm be broken, the *Radius* requires the more Extension, because it hath no Muscles to draw it upwards, its motion being only *secundum primum & supinum*. In Extension it behoves us to observe *debitam figurationem*, that the Member be extended *in ea figura quæ minimum facit dolorem*, saith *Galen*: which is done, if the Fibres of the Muscles be stretcht according to their rectitude. Children, and such as are of a soft Habit of body, do best suffer Extension: Elderly and dry Bodies the contrary.

In the next place 'is to be considered the most reasonable time wherein to reduce the Fractures. And herein we all agree, the sooner the better, and that to avoid Inflammation; and according to *Celsus*, *Si in primis diebus non restitatur, inflammatio oritur, &c.* If at the first or second day the Fracture be not reduced it is in danger of Inflammation and Mortification: For indeed after the second day, it is supposed the Fracture is accompanied with great Defluxion, and so yields not to Extension without hazard of drawing such ill Accidents upon it self.

Therefore *Fallopins* in his Exposition upon *Hippocrates De Capitis vulneribus*, and by his authority, tells us what we should do in such a case. *Si os non fuerit in suo loco, says he, ideo ad septimam, qui est primus terminus Inflammationis, vel usque ad nonam, qui est secundus, debemus bene advertere: & oportet impedire inflammationem.* If the Bone was not restored before the time of Inflammation, then we ought to attend till the seventh day, which is the first period of Inflammation, or until the ninth day, which is the second period: And all this time we ought to restrain the Defluxion, *vel per lenitionem doloris, vel expressionem & deligationem loci. Lenimus autem medicamentis oleosis, quæ habent vim refrigerandi, vel per deligationem pluribus fasciis*; either by lenient Medicines, or by Deligation. We lenifie with soft cooling Oils: We make our Deligation or Bandage by many turns of the Rowlers. These are to be done until the seventh or ninth day. Inflammation abating gives you opportunity for reducing the Fracture. The Instruments for Extension

Instruments of
are extension.

are threetold. First, the Chirurgion's Hand, for gentle Extension: And let him place his Hand near the Fracture; otherwise he shall hurt the sound Part by too much Compression, and not avail himself much in his Extension. Secondly for the middle Extension there are *Funes* and *Habena*, a sort of Bandage fit to pluck at in order to Extension. Thirdly, there are *Organa* and *Machinamenta*, Engines used often by us, but invented by the Ancients: And they are for the most strong Extension. But before you make your Extension, consider whether the Member be not fractured in more places than one. - An old Gentleman came out of the Country, and by a Fall going down *Ludgate-hill* brake his right Arm a little above the Wrist transverse; and near the bending of the Arm was a second Fracture oblique. This double Fracture hath happened to others in the Leg. It requires your circumspection, lest the one escape our sight, and the Member be left deformed, and weakened in its action.

Coaptation.

Signs of good Coaptation.

2. Intention.

1. Rowler.

2. Rowler.

Splenia.

The Extension made, the extenders are to be loosened gently, and the Operator must with his hand endeavour as gently to press down the ends of the Bones, and joyn them smooth and even together. And if there be any little Shiver that will not be placed even with its fellows, cut upon it, and take it out. You shall know the perfect Coaptation of Parts by these Signs. First, if the fractured Member answer to the sound; secondly, if by your handling of it you feel no Inequality; and thirdly, if Pain be abated.

The second Intention in curing of Fractures is, that the Parts brought together may so be preserved: And that is performed by Bandage, which ought to be so made, as not only to keep the Parts so joined together, but to defend them from Inflammation. And to this purpose I commend to you that of *Hippocrates* from my own practice. It consists of three Rowlers made of linen Cloth, not too coarse, lest thereby it should offend the fractured Member; nor yet too soft and fine, lest it break.

With the first Rowler you are to begin upon the Fracture, and take three Turns there. Then rowl upward to the sound part, and so a little higher, and there end this Rowler. It will keep the Fracture a little steady, until the other Bandage be made, and restrains the influx of Humours which might cause Inflammation.

The second Rowler ought to be as long again as the first, and must be rowled contrary to the first; as for instance, if the first was made to the right hand, this must be turned to the left: So that if the Muscles by the first Bandage were wreathed too much on one side, they now may be restored again to the other. This second Rowler must begin upon the Fracture, and after a Turn or two there, must be carried downwards, that so you may press the influx of Humours from the fractured part. And so having made three or four Turns downwards upon the sound part, you may rowl upwards again by the Fracture, and making a Circumvolution upon the Fracture it self, pass upwards, until you come to the end of the first Rowler. And there *Hippocrates* terminates this second Bandage, because there is fear of the descent of Humours *à parte superiori*: And these two Bandages do more defend the Part from Inflammation, than strengthen the Fracture. But they being made, *Hippocrates* puts over them Compresses of linen Cloth three or four times doubled, of such length as to reach over the Fracture; but so narrow, as that five or six might be placed round about the Fracture, the distance of a finger one from another. These are to be spread with a little Cerote, only to make them stick. They are called *Plagula* and *Splenia* from their figure, and do supply the defect of agglutinative Medicaments, and lessen the Pain, by hindring the Compression of the Bandage.

The

The third Rowler of *Hippocrates* fastens the said Compresses; and its first Turn is made upon the Fracture, the one head being carried upwards, and the other downwards. And you are to take notice, that the Bandages are to be drawn more streight upon the fractured Parts than elsewhere, that the said Parts being more weak, may be kept from Defluxions.

Celsus in his eighth Book, and tenth Chapter, proposes another way of Bandage. First, he dipt a Cloth in Red wine and Oil, and applied it over and about the Fracture, and over that he brought six Rowlers, his two first being those of *Hippocrates*, and so he rowled them: then he used a broad double linen Cloth, spred with Cerote, to keep them close down. And his reason is, because the fractured Bone hath always a propensity that way whither it tended when fractured; therefore, saith he, you are always to put a Compress of linen Cloth, dipt in Wine and Oil, *ei parti quæ contraria est parti in quam membrum inclinat*. And over this he brings the four remaining Rowlers; so as the following Rowler be rowled contrary to the former, and the third end *in inferiori parte*, in the lower part, *reliquæ omnes in superiori terminum habeant*, all the rest end above.

Celsus's
way of
Rowling.

These are the Bandages of *Hippocrates* and *Celsus*, men of the greatest Authority in Chirurgery, and are followed almost by all that have writ since, and are of excellent use in Fractures in and near the Joynts, where there is fear of Inflammation. But then in your Binding you must observe such a mean as consists with the ease of the Member bound. A small and lax Tumour appearing at the extremity of the Member a day after, is a sign of good Bandage: But if there appear no Tumour, or if the Swelling be great or hard, then the Bandage is naught; the first shewing the Bandage not to be streight enough, and the last too streight. Therefore you should often visit your Patient, to inform your self how the Bandage is.

Signs of
good Ban-
dage.

But if no Accident happen, you shall not unbind the Fracture until the Seventh day: And then, if all be well, the Bandage will begin to slacken of it self; and if it be not well, you may then see your Error, and timely help it. And that is one reason, why Fractures should be opened about that time. Another may be, for that often in Fractures there is an intolerable Itching, through the detention of Humours, which are made sharp by Deligation, (Perspiration being thereby hindred,) and that is wont to terminate in a most painful Excoriation and inflamed Redness. In which case you are to bath the affected Part with warm Water, that the Matter may be evaporated: And then the Member is to be bound up again. But here you are to put *Ferulæ* or Splints instead of the *Splenia* or Compresses. Whereas in Fractures with great Contusion, or in and near the Joints, I have continued the use of Compresses wet in Whites of Eggs during the whole Cure with good success. And lately a Youth about 10 years of age, labouring under a carious Ulcer in his Foot, the last great Frost brake his Thigh-bone according to the length of the Member. This Fracture was covered with *empl. è bolo* and *Splenia* moistened *in album. ovor.* with Bandage, &c. as is proposed in this Treatise; by which the fractured Bones were kept even and close together with much ease to the Child, and agglutinated firmly by the *Callus* intervening. Mr. *Towel*, sometimes a Servant of mine, set his Thigh-bone for me, I being at that present otherwise employed.

When to
loosen
Bandage:

Observat.

But all the Ancients after the seventh day did use Splints; and so have I where they might safely be used: For they not only keep the Member steady, but straight. And of these some are made of Tin, others of Scabbard, Past-board, and of Wood, sowed up in linen Cloaths. Those of Tin do very well, by reason of their lightness. Those of Scabbards are apt to bow, and so

those of the thickest Pastboard, especially if they chance to be wet. And those of Wood are heavy, and apt to inflame the Member. Yet through the Artist's care they may be all used with good success, yea from the first day of the Fracture: As in the case of a Reverend Divine, who brake both the Focils of his left Leg within a few Fingers breadth of the Ankle. This person laboured under an *Asthma*, which grievously shook the fractured Member; wherefore I was necessitated to put on *Ferula* the very first dressing, which I continued the use of during the whole time of his Cure. He lately told me, that he never felt the least pain in that Leg since I took off the last Plaster, which is more than 10 years since. But *Hippocrates* used them not until the seventh day. For before that day there was more need of hindring the Inflammation, than of strengthening the Fracture; *post septimam contra*, but afterward the contrary is required.

3 Inten-
tion.

The third Intention in curing of Fractures is, in preserving the Tone of the Part. *Natura enim os unire nequit, nisi pars sit sana*; Nature cannot knit the Bones while the Parts are under a Distemper: And that cannot presently be removed. For though fractured Bones be very well set, yet there will remain some *Cavernula*, which will be apt to fill with *Sanies*, which the part through its weakness can neither well assimilate nor expel, and so is like to be burthened with excrementitious Humours. Therefore Phlebotomy may be here of special use, and the keeping of the Belly soluble by Clysters, or otherwise, and a slender Diet must be prescribed. This is the work of the Physicians. But they not being always at hand, I thought fit to mention it, and so to proceed to our own work, in keeping up the Tone of the Part. And hereto we have need of such Medicines *que materiam influxam desiccant, & inflammationem repellunt*, which dry up Serosities, and repel Inflammation. And these in a word are *Astringentia*, of which we have choice. *Hippocrates* used Cerote, then Red wine: *Gelsus*, as you have heard, used Oil of Myrtils and Roses, Red wine, and Whites of Eggs together: Others again used Whites of Eggs alone; and others added Oil of Myrtil, *balauft. ros. rubr. sang. dracon. bol. Armen.* and with a little Wine made it up to the consistence of a Liniment, and applied it upon Cloths over the Fracture. By the use of this latter Medicament I cured a man whose Arm was sore bruised, and fractured in many pieces, by the fall of a piece of Cannon, which brake loose in a Storm, while we were preparing to lay abroad our Enemy. Over this Restrictive I applied *Splenia* of double soft Linen with Bandage, as in Compound Fractures, and happily Cured him. If the Inflammation be not great, I then take *empl. diapalmæ*, and some of the forementioned Powders, with a little Oil of Myrtil and Vinegar, made up to the consistence of an Emplaster, which I spread upon Cloth pretty thick, and apply over the Fracture. It not only restrains the Defluxion, but strengthens the Fracture. The Medicaments proposed are all very good, and excellently preserve the Tone of the Part, if they be proportioned according to the greatness of the Malady:

Position
of the
Member.

There is yet farther requisite to the performance of this Intention, a right Position of the Member: And that, according to *Galen*, *debet esse mollis*; the hurt Part ought to lie soft: For that hard lying presses upon the bruised Bones and Flesh, and causes Pain and Inflammation. *Debet esse equalis, ne distorqueat*; It must lie smooth or equal, because an uneven placing distorts or draws awry the Part. *Sursum versus, ne humores descendant*; It should lie somewhat high, lest a painful Defluxion fall upon it. *Oportet congruam membri figurationem considerare*: It behoves, saith *Hildanus*, to consider the convenient figure of the Member, that the Muscles be kept in their right Site, which is most free from Pain. *Hæc autem est figura media*; which if it be not observed

observed, *exiguo post tempore membrum dolore solet*. What those Pains are, you may possibly guess, but no tongue express. Therefore you ought to handle the Member very tenderly; and if the Fracture be made in *Cubita*, place it in a Case made of Pastboard, with a soft Pillow under it, and bring it up the Breast with a fine Towel, or the like. But if it be the Leg that is fractured, we then place it in a Bed, or in a Cradle, or upon a Pillow quilted in the midst with Junks to support it; having a special care that the Hollow of the Ham and Heel be filled up, lest the weight of the Foot hurt the Heel, from whence grievous Pain doth ensue, and sad Accidents may follow, as at large you may read in *Fabr. Hildanus*.

The fourth Intention is, *Callum generare*, to make *Callus*; which is to be endeavoured after the fear of Inflammation is over, *quia natura partis laesa non potest Callum generare*; and that ceaseth *circa diem septimam*, about the seventh day, sooner or later. And if after that time the Fracture be to be set, *possunt diversa & mala accidentia generari*, saith *Vigo*. Yet after the seventeenth day of the Fracture I have set the Thigh-bone, and cured the Patient, without any ill Accidents: He is yet living to testify it.

How the *Callus* is made, you may read at large in *Fallopins*, in his Exposition of *Hippocrates*. And though it be not Bone, it is so hard, saith he, that if the Member hap again to be broke, *potius in alia parte frangitur, quam ubi Callus est genitus*, it breaks any where rather than in the *Callus*.

Two things are therefore required: First, that it be supplied with fit matter; secondly, that that matter be not washed from the edges of the fractured Bones, *aut foras evocetur*, saith *Galen*. As for the matter to make *Callus*, most Authors do agree, that there be a greater liberty in Diet. *At quo tempore* (saith *Galen*) *Callus gignitur, nutriendum corpus est cibis boni succi & qui multum nutriant*. And that must be viscous: His reason is, *quia ossis alimentum crassum*. And for that reason Authors commend at this time offal of Fleish, and Broths of Kid and Veal, and the like, boiled with Rice or Wheat. They also allow sweet Wines. But this liberty in Diet I think is better forboren, for thereby we often see great Obstructions arise, especially there where our Patients are inclinable to feed plentifully. Therefore in such Fractures where the Patient is constrained to keep his Bed, I propose a slender Diet, and of such things as are of easie Digestion. For without that liberty surely we cannot fail to compleat our Cure; the Bones having naturally a Poriness in them, in which is always contained a matter fit for their Nourishment; and *ex illo ipso nutrimento in fracturis generatur Callus*, of that Nourishment *Callus* is made. So if we be careful to prevent Inflammation, and the like Mischiefs, which disturb Nature in her actions, and apply such Remedies as may dry the proper Nourishment into *Callus*, we shall not fail then of our desire: And those Remedies, according to *Galen*, ought to be Emplastick and moderately hot. For, saith he, *ea Callos tum promovent, tum augent: Quae digerendi vim obtinent, ea magnos jam Callos diminuant*. Therefore it behoves us with care to fit our Medicines to the Age and Constitution of our Patients. For those which are proper for Men of ripe Age, if applied to Children and tender Bodies, would so dry the *Callus*, that they would quite diminish it, and frustrate our Cure. In Children *Albucastus* commends to us the application of Whites of Eggs alone, or with a little *farina volatilis*: in those of more years, *pulv. myrrhae, aloes, acaciae, cum. tragacanth. thus, labdanum*, &c. *Emplastrum stict. Paracels. diapalm. oxycroceum*, severally or mixt, are proper. But this latter *Vigo* is very angry with, and says it is a Diabolical Emplaster, too hot for the Summer, and not very proper for Winter. *Vigo's emplastr. ad ossium fracturas* is excellent; and so is our *Catagmaticum*.

maticum in the *London Dispensatory*. As to internal Medicines, there are many; but I shall only recommend to you *osteocolla*, and that by the authority of *Fabr. Hildanus*, who often experienced it. The Dose was $\text{ʒj. in aq. rad. symphyti}$: And with this so given he cured a compound Fracture in one above sixty years of age. *At in juvenibus & succulentis non putat convenire osteocollum.*

Thus I have proposed fit materials for the generation of *Callus*: Now lest that the matter of which it is to be generated should be hindered from thrusting forth, it behoveth you to alter the Bandage, the Member not requiring to be rowled now so streight; by which means the nutritious Juices will have liberty to flow in, and there by gradual Digestion to thicken into a *Callus*. In taking off your Dressings, you are to consider whether the *Callus* generated be such as is required. How the fault of the *Callus* is to be remedied, if it be greater or less than it should be, you shall hear presently.

If the Fracture be simple, whether transverse or *secundum longitudinem*, they are cured by the same methods; only these latter require a more strict Bandage, otherwise the Bones will be apt to rise and make a gibbous Member.

5. Intention.

The fifth Intention is, the correcting of those Accidents which happening in Fractures retard their Cure: And they are many; as Pain, Inflammation, Apostemation, Gangrene, Itching, Excoriation, *Callus* more or less than should be, Weakness of the Member, and depraved Figure. If Pain invade the place, then Lenients are proper, and such remedies as restrain Defluxion, and hinder Inflammation; of which sort I have mentioned some, and for more variety refer you to those which are set down in the Chapter of *Plegmon*. If Gangrene appear, slacken your Bandage, and foment the Part with a *Lixivium* in which have been boil'd *scordium*, *absinth*, *centaur*, and the like. You may also apply over all a Cataplasm of Barley-meal, Lupines, with the addition of such Ingredients as have been prescribed in the Chapter of *Gangrena*. But if Itching affect the Part, then foment it with warm Water, which will give a breathing to it by the Pores; or with Salt-water, *que propter salem expurgat & poros aperit*. The Itching neglected is wont to terminate in *excoriationem dolorosam*, in a very painful Excoriation, *cui occurrendum est exsiccantibus & refrigerantibus*; such are *unguent. alb. camph. nutritum*, *populeon*, &c.

To lessen
Callus.

As to the *Callus*, it is sometimes just, sometimes greater or lesser than it ought. If it be too great, you will perceive it by its bunching out, as also it will be painful to the touch or pressure; and besides it renders the Part unapt for motion. In this case abate the Patient's Diet make your Bandage more strict, and foment with Discutients, also apply *empl. de cicuta*, *de ranis cum Mercurio*, &c.

To increase
Callus.

But if the *Callus* be less than fit, the signs are, *quod ad motum redditur debilis*, the Bone is weak, and if the Part be toucht you scarce feel the *Callus*. And this was thought by the Antients to proceed from slenderness of Diet, or that it was not enough incrassating. But I think it rather proceeds from improper Applications, or too streight Bandage. Yet if the Patient be in years, and of a spare Body, you may both increase and incrassate his Diet: But without slacken your Bandage, and invite forth the Humours by warm Water, not too hot, *donec pars rubescat, & in tumorem attollatur*, until the fractured parts a little swell; *tunc enim desistendum*. But if the member be extenuated, it is either from the too streight Bandage, or overmuch bathing with warm Water: Therefore you must now bath with fresh Broths, and other good Embrocations. Also a Pitch plaister applied and presently pulled off again, will by its adhesion to the Hair and Skin cause Pain, and likewise an attraction of Aliment to the Part, and so the Member may be nourished.

Sometimes

Sometimes also after the Fracture is cured, the Member is found to be of a depraved Figure, by reason the Bones were not well set, or through ill Bandage, or some inordinate motion, *aut propter inscitiam Chirurgi*. To resolve this *Callus*, some Authors have adventured to prescribe sundry Medicaments; but they have hitherto proved unsuccessful. Yet if it be true what a Chirurgeon lately affirmed of *empl. de minio*, the work would be very facil. But *Celsus* and *Fabr. ab Aquapend.* after the prescribing various Remedies conclude at last thus: If the Patient be young and lusty, and the *Callus* but six months old, there is yet one refuge, that is, *fracturam de novo rumpere*: and in order thereunto, you are to foment the Part with Decoction *ex althea. rad. lilior. fol. mal. var. taps. barbat. cicuta, &c.* and then *rursus os frangitur manibus vel digitis, impellendo seu comprimendo*. But if the *Callus* be so hard that it yields not to your hands, then says *Fabr. ab Aquapend.* *frango eum instrumento attrahente in diversas partes*. But this, *Albucasis*, a Chirurgeon as bold as any, and one that had seen the effects of such rash undertakings, utterly condemns, saying, it is *operatio valde vituperabilis, perducens ad mortem*: therefore he adviseth the Patient not to give ear to such vain people, but rather content himself with such help as emollient Decoctions, Liniments, and Emplasters may effect. Which in truth is safer, if you consider, that after the *Callus* is so confirmed that it will not yield to Extension, then if you should break it anew, or any other way separate it; yet it would no more yield to a right Coaptation, than a Hair lip or my two Fingers will to Agglutination without separating the Callosity; which is not possible to be done in Bones.

I could have here inserted many Instances of my work in the Cure of the several Fractures of particular Parts: But it would signifie little more than I have already written, their Cure consisting in the very same Extension and Coaptation, and they being subject to no other Accidents than what I have set down: all which I have writ as plainly and feelingly, as if I had been performing the work in your presence. Yet as a rarity I shall give you one Instance.

Some years before the Fire, I was sent for to a poor Widow inhabiting near *Bridewel*, whose little Son, of about eight years of age, playing about the Wharf, was struck by one of those great Cart-horses full in the Face, beating the *Ethmoides* quite in from the *Os cribriforme*, without any great Wound. The Boy lay for dead a while, and dozed longer. It appeared a strange sight at first to me, his face being beaten in, and the lower Jaw sticking out: Nor did I presently know how to help him, or by what art to make my Extension. But after a while, he a little recovering his Senses, was perswaded to open his Mouth. And there I saw the *Os palati Uvula* beaten so close backwards, that it was not possible for me to get my finger behind, as I designed; and other way of Extension there was none. Upon which I presently formed an Instrument bended up at one end, by which I got up behind the *Uvula*; then raising it a little upward, pulled it forward with the Bone into its former place very easily. But I no sooner let go my Extender than the fractured body returned back again. I then contented my self in dressing up the Face with a restrictive Cerote, to prevent the Influx of Humours, and let him blood, and within a few hours after caused an Instrument to be made, whereby the great fractured body was more easily brought into its natural place, and also kept there by the hand of the Child, his Mother and my Servants helping him some while: other way there was none. Thus by their and our care, the Tone of the Part was preserved, and a *Callus* thrust forth, which as it hardened, the Part grew stronger, and the Face was restored to a good shape, better than could

1 Observ
of a fra-
ctured
Face.

could have been hoped for from such a Distortion in that place. The Patient is yet alive and well.

2. Observ.
of a fractured
Clavicle,
&c.

A Page attending a Noble Family, riding behind the Coach, fell down bruised his Face, and broke his right Collar-bone. He was taken up and carried to the next Pretender to Chirurgery, who seeing his Face much swelled, and his Nose bloody, concluded it fractured, and fill'd up his Nostrils with Tents, binding them up with Plaisters; and finding his lower Jaws standing unequally with the upper, concluded them luxated, and that part of the *Sternon* under the Collar-bone was broke down. Things being thus represented, I was sent to view this Youth: and pulling off the Plaister, and the Tents out of his Nose, I saw neither Wound nor Fracture. His Jaws did not answer equally to one another; but by his frequent motion and champing with them, it was evident they were neither luxated nor fractured. But by his Fall the Bones of his Face seemed to be pressed inward, and the uppermost Jaws were crushed nearer one another than they should: and this made the Inequality which our Chirurgeon thought a fault in the lower Jaws, and by his pulling them had like to have broken or dislocated them. The next day he called in a Chirurgeon to justify his proceedings. But there appearing nothing of Luxation or Fracture in the Jaws, we looked upon the *Sternon*, and found it well; but that Collar-bone was broken oblique, which we set and bound up, with resolution not to open it till it should be united. All things being in this hopeful condition, we advised him to keep his Bed, and left him to observe the Directions of his Physician, by whose prescription a Clyster was administred that evening, which he voided into a white earthen Chamber-pot, which his Chirurgeon looking into call'd it blood and alarm'd his Friends. But a discreet person looking afterward upon it, concluded it only the Clyster tintured with red Sugar, *Hiera picra*, &c. I being soon after fetched, confirmed the same, and appeased that clamour. About the tenth day our Chirurgeon, contrary to former order, undressed the fractured Clavicle: upon whose binding it too slack the Bone started, and from that time it grew painful; so that he dressed it again four or five days after: but the Pain increasing the more, I was fetched, and upon opening saw one end of the Clavicle riding over the other, and pricking against the Skin. The *Callus* being confirmed, the Patient was removed from his Chirurgeon's house to his Mothers in the City, where being in great Pain, his Chirurgeon dressed him again; and the streighter he made the Bandage, the greater was the Pain. He not imagining the cause, imputed the fault to the unruliness of the Patient, and declared that the Fracture was yet in the Bone, and that it was incapable of Cure. Upon which I was sent for, and seeing the Pain to proceed from the end of the fractured Bone pricking in the Skin, and the more when it was bound, I caused half a Walnut-shell to be plaistered over it: and having thereby defended it from Pressure, he made use of his Arm, and complained no more of Pain. I then designed to cut off that end of the Bone if it again pained him: but from that time it continued easy, and he recovered the use of that Arm very well.

Compound
Fractures.

Thus have I done with that which concerns Simple Fractures. In a Fracture with a Wound, if neither the Bone be bare, nor yet prominent through the Skin, then you are by Extension to bring the fractured ends of the Bone together, as was proposed in the first and second Intentions of Simple Fractures. And the Lips of the Wound are likewise to be brought together by Suture, if it be any whit large, and not too much contused. Which manner of dressing is contrary to what is taught in Gun-shot Wounds with Fracture; the method being to be altered upon that occasion for the reasons there alledged. Then endeavour, as in our third Intention, to keep the fractured and wounded Parts together by dressings, which may as well mitigate the Pain, as keep off Apostema-

Apostemation, by repelling the Matter flowing to the Parts, and drying up that which already affecteth the Fracture and Wound: *qualia sunt Astringentia*, that is by Astringents; with which I have sufficiently furnished you in the Discourse of simple Fractures. *Galen*, by the authority of *Hippocrates*, recommends Cerote of Roses. But if there be no Pain, you are to endeavour the strengthening of the Fracture, and preventing Defluxions, by Cloths spread with that Composition of astringent Powders, mixt with the Whites of Eggs and Red wine, which is already proposed. Then follows Deligation of the Part: and in this case Bandages are to be made of softer and broader Linen than we use in Fractures without a Wound, that they may comprehend both the Lips of the Wound, and keep them down, yet not hurt them by too hard Compression. *Minus astringenda sunt fasciæ quàm si vulnus non adesset*, says *Celsus*. And therefore it is that *Hippocrates* and *Celsus* make so many Circumvolutions; *cùm melius sit sæpe circumire quàm astringere*, saith *Celsus* again. The third day they loosen the Bandage: then *ferule vel non aponenda, nè vulnus compriment*, saith *Albucasis*; or if they be put on, *super vulnus apponi non debent*. Rather in these Fractures do we use Deligation, *pluribus fasciis*, with many Rowlers, saith *Albucasis*. And so all along he proceeds in his Discourses of Fractures, as if he had been rather bred under *Hippocrates* or *Celsus*, in Greece or Italy, than where he was. But in truth this way of Deligation is not only very troublesome to the Chirurgeon, to put on and off, but so very painful to the Patient, that it is almost impossible that he should ever be without a Fever, if his Wound be every day to be so rowled and unrowled. Therefore in these Compound Fractures we chuse rather to follow the method of some of the Moderns, who, instead of these many long Rowlers, make choice of two or three short Cloths, folded three or four times double, to give them the more strength. We also make them of such breadth, as to encompass the Lips of the Wound and the fractured Parts; and of that length, as to come once about the Fracture, and so sticht together on the most convenient side. And under these may be placed Compresses of fine Tow, or double Cloaths; which will not only keep the Lips of the Wound down, but fill up the Inequality, and further expulsion of Matter. And so the Wound may be drest, and the fractured Member relieved at your pleasure, without giving the Patient the pain to have the fractured Member removed, or your self the trouble of rowling and unrowling so many long rowlers as the Ancients proposed. With this method I have cured Arms and Legs, so shattered by Splinters from Cannon-shot, and with such loss of Substance, that I even despaired of their Cure. But in some of these I have made use of *Hippocrates's Plagulae*; and often, for the more strengthening the shattered Member, have been glad to make use of some Splints from the first day; but so as their compression was gentle and equal, and so placed that the Lips of the Wound might be kept even, and that the discharge of Matter was by them furthered. But if the Wound be transverse, it then requires more caution, lest the Matter should at any time be prest back into the Wound, and so not only dilate it, but foul the Bones.

Thus much for a Fracture with a Wound where the Bones are not exposed to the Air. But if the Bone be bare, and thrust it self out of the Wound, you shall endeavour presently to reduce it; and after it is restored to its natural place, let the Wound be sticht and drest, as I proposed to you even now in the Compound Fracture.

A Commander at Sea, valiantly fighting in the midst of the Enemy's Fleet, had his Leg fractured by the fall of his Mizzen Top mast, it breaking his Leg transverse near the Ankle, the edge of the Bone thrusting out through the Skin,

3. Obsev.
of a fractured Leg.

Skin. He not suffering the Bone then presently to be set while it was warm, afterwards when it was swelled and stiff, it did not yield to extension, but became painful and inflamed. After some few days he was brought to London, and I was sent to him. He was of an ill Habit of Body, subject to the Gout and Dysentery; and the fracture being accompanied with great Defluxion was not in a condition to admit of Extension. Therefore, according to *Fallopins* and *Hippocrates*, before cited by me in this Treatise, I proposed to his Chirurgion to proceed by Lenients, to mitigate Pain, Inflammation, &c. and by Bandage to hinder Defluxion. Which we did; and his Chirurgion continued that method a few days, by which the Accidents were remitted. When we met again, finding the Patient in ease, we took off the Dressings, and agreed to make Extension, and reduce the Fracture. The Patient was of a dry tough Body, and the Member yielded difficultly to the Stretch: upon which consideration we satisfied our selves with a moderate Extension, doubting that upon a more forcible one ill Accidents might follow, (as an Inflammation presently did.) We drest it up as a compound Fracture: and after some days dressing a *Callus* thrust forth, and united the Bones. That *Callus* being confirmed and dried, we hastened the Exfoliation of the foul Bone by a little *Ægyptiacum* and *pulv. myrrhæ* dissolved in *spir. vini*, applied hot upon an armed Probe. Thus the Bone was exfoliated, and the Ulcer cured by the ordinary Intentions in such cases. Yet the inward leaning of the Bone continued a weakness in the Member a long time, as is usual where the Fracture hath not been timely or well reduced. To remedy this, I caused a Bar of Steel to be fixed in his Shooe with joints, and by a Bracer of Cloth to be laced on, or tied with Ribbons on the outside of his Leg; by which it was marvellously strengthened.

But if the end of the bared Bone do chance to thrust it self so out, as that without great force it cannot be restored to its place; *tunc è duobus malis minus est eligendum*; then that end of the Bone which hath thrust it self so far out is to be saw'd off: and if this be done timely, before a Gangrene hath seized upon the Part, it may be performed with good success.

4. Observ.
of both the
Focils of
the Leg
fractured.

In *St. Clement's* Parish behind the Church, some years since, while I was one evening preparing my Dressings for the setting of a fractured Thigh-bone in a little Child, I was hastily fetcht to assist one Mr. *Powell*, a Barber-chirurgion, in the setting of a Fracture of both the Focils of the Leg in a Man about sixty years of age, of a tough dry Body. There I met Mr. *Tatham*, an industrious knowing Chirurgion. The Fracture was oblique, almost *secundum longitudinem*; and the *Os tibiæ* or greater Focil had shut it self out by the inside of the Ankle a great length. We eadeavoured by a strong Extension to reduce this fractured Bone into its place; but it yielded very difficultly to our endeavour: yet we reduced it, and afterwards cleansed the Wound of what Shivers or pieces of Bones we met with, and brought the Lips of the Wound together by Suture, hoping thereby to keep the fractured Bone the closer. Then we drest the Wound with our Digestive warm, and with an *empl. diachalcit.* malaxt with *ol. ros.* and over the fractured Parts we applied the Mixture following spread upon a double Cloth: *R. stor. ros. rubr. balanst. baccar. myrtill. bol. Armen. sang. dracon. an. q. s. pulveriz. cum albumin. ovor. ol. ros. & acet. Misc. ad consist. mell.* This we fastned by Bandage, as hath been shewed in Compound Fractures: and for the more strengthening the fractured Member, we placed *Splenia* over that Bandage, with *Ferule* upon them; and having fastened them by three Ligatures, we placed the Member as much to the ease of the Patient as we could contrive, upon a Pillow quilted in the middle, with Junks to keep it steady. But these great

great Fractures with large Wounds, and near the Joint, are always subject to grievous Pain; and this much more, for that the Tendons and Musculous flesh were sorely torn, and stretcht by the great Extension: so it was not likely to be attended with less mischief than afterward befel it. We let him blood that night, and gave him an Anodyne draught to dispose him to rest. But he slept little, his Pain continuing with much disturbance: a Fever also followed, and within two or three days he became delirious, and in the absence of his Attendants got out of his Bed; upon which the great Focil flew out as at first, and the poor man fell down on the floor as half dead. We were both presently fetcht, and taking off the Dressings, we saw the Bone distorted, the lower Stitches broken, and the Wound of an ill aspect, as it were tending to Mortification; also the Bone thrust out so far, that there was no hopes of its being any more reduced by a new Extension. Upon which consideration we resolved to saw off the end of it: and to that purpose having prepared all things ready, we cut out the remaining Stitches, and turned the Foot on one side towards the small of the Leg, thrusting the Bone more out; the one sawing the end off, whilst the other with a *Spatula*, defended the Tendinous flesh underneath from being wounded by the Saw. That done, we cleansed the Wound from the Saw-dust, as also from the Shivers of little Bones which we had not discovered in our first dressing, they lying pricking the *Periosteum*, between the fractured Bones and Membranes, by which those sad Accidents had been hastened. The Wound thus cleansed, we turned the Foot right into its natural place, there being no need of Extension: which being done, we scarified the Lips of the Wound, and washt them *cum spir. vini*, with a little *Ægyptiac.* dissolved in it, and applied to the ends of the Bones Pledgits dipt in the same, and prest out. We also drest the rest of the Wound *cum unguen t. basilic.* with a little *ol. terebinth.* warm, and applied a Mixture of an *Emplastrum Paracels.* and *diachalcit.* over the Wound and Parts about, and then Compress and Bandage over that, as in Compound Fractures. The great work was now, how to support the Foot, and keep it even with the rest of the Leg, there being so great a distance between them without any Bone. But we having placed the Leg upon a quilted Pillow laid him again in his Bed, and fitted it in a Wainscot case, where it was kept steady and equal, and lay conveniently for our daily dressing him. This done, we committed him to the care of his Friends to keep him there quiet, and ordered him cordial Juleps, &c. After some hours we let him blood again. From that time his Pains lessened, and his Fever and other ill Symptoms went off as the Wound digested. But after some days the Heel became very painful, and a Slough was discovered to us inflamed with an Ulceration sticking to the very Bone. The Patient not permitting to have the Case, wherein his Foot and Leg was, stirred, it had not been raised up, as for perspiration it ought to have been; whence this Ulcer became very troublesome to us. For a present Relief, we laid him upon his Side, and drest the Ulcer with Lenients, to hasten separation of that Eschar. And because the Patient grew soon weary of his Position, which also was inconvenient for our dressing the great Wound, we therefore designed an Instrument of Tin to receive his Boot and Leg, his Heel to lye hollow in a place cut for that purpose, whereby we could daily dress it without disturbing the Patient, only placing him down lower towards the Bed's feet, that the Heel might lye over it. The side of this Instrument, that came up by the Wound, was to be taken off at the time of dressing his Wound, and afterward placed close again; whereby he was drest without disturbing the weak Member. It lay also soft, by reason of the Folds of Linen we placed

under and between the Leg and Instrument: it was also kept streight, in hopes it might be supplied with *Callus*. But the Wound became sinuous, and the Matter fouling the Bones hindred the growth of *Callus*; and while we waited for Exfoliation, the Lips of the Ulcer became callous, which prolonged the Cure. The Ulcer in the Heel we digested: and after we found the Bone would not incarn, we drest it with *unguent. Egyptiac.* with a little *Merc. subl.* dissolved in it; by which dressing we hastened the Exfoliation of the Bone, and cured the Ulcer. The Wound above was a larger work: but after the Generation of *Callus* it cured as a *Fistula* with carious Bones. The Patient lived many years after: but through the ill disposition of the Ulcer, the *Callus* was hindred in its growth, whereby the Leg remained the shorter, almost as much as had been sawed off of the Bone. Yet this was better, I suppose, than to leave the Bone distorted until Digestion, as in such like Case I have seen done. But if the Bone be not so much distorted as that you may come to saw off the end of it, or if you cannot reduce it after the ordinary way; then you may with a Chisel-like instrument thrust between the fractured ends of the Bone, and use it after the manner of a Lever, for the reduction of the Prominencies. But then it is supposed these fractured ends of them are within the Wound, and have not much over-shot one another, and the Fracture is transverse or oblique: otherwise this way will do little good; nay may possibly rive up the piece of Bone, and make another kind of Fracture, and grievously pain the Patient to no purpose. And that you may easily do, if the ends break off upon your hard and unsteady Extension. Therefore it becomes you to be very wary in making this Extension; else, I say, you may put the Patient to sad pain, and do him little good.

But to conclude, after your Extension is made, and the Bone reduced, you are to feel if there be any Shivers of Bones loose, and pull them out. And if you perform this Operation in a Fracture newly made, then you are to prevent Inflammation and all other Accidents, by dressing up the Patient with such Medicines as have been proposed in Compound Fractures; and make your Bandage so, that you may come to dress the Wound, as occasion shall offer, with as little molestation of the fractured Member as is possible; having a care you grieve not the tender Parts with Splints, until the Inflammation be over, and the Wound well digested.

Then afterwards 'tis to be endeavoured, that the Bones robb'd of their *Periosteum* may again be incarned or exfoliated; which is the work of Nature, yet ought to be helpt by Medicines which have a manifest hot and drying quality, and a peculiar faculty thereto, of which there are enough set down in the Treatise of *Gun-shot Wounds*.

The Bones exfoliated, the Cure of the Ulcer will succeed of course, or may be performed by Epuloticks, of which you may have choice in this Book.

C H A P. II.

Of Luxations in General.

I N several Observations in this Book I have had occasion to take notice of the inconvenience many people have fallen into through the wickedness of those who pretend to the reducing luxated Joints by the peculiar name of *Bone-setters*: who (that they may not want employment) do usually represent every Bone dislocated they are called to look upon; though possibly it be but a *Ganglion*, or other crude Tumour or preternatural Protuberance of some

some part of a Joint. In which cases their rash Extensions do frequently cause sad Accidents. But their more gainful way is by extending, and dressing up Joints rather wrenched than dislocated: in which if they escape undetected, they must needs reap great credit, the Patient recovering so soon the ease and use of them. Whereas if the Joints happen really to be luxated, scarce one of them knoweth how to reduce them. In consideration of this daily abuse, and the inadvertency of the young Chirurgeon, whose not timely discerning the Luxation renders it more difficult to reduce, I have thought fit to say somewhat to this part of Chirurgery; and first in general.

He that will give an account of *Luxations*, and the manner of their Cure, ought first to describe the Connexion of the Bones to each other: on the divers manners of which depend the great variety of methods in reducing and handling of them. These Connexions we find to be of two sorts; 1 *Symphysis*. 2. *Articulatio*.

I. *Symphysis* in its original signification denotes a *Connascency* or *Growing together*; and perhaps is meant of those Bones which in young Children are distinct, but after some years unite and consolidate into one Bone. So the *Os ileon* and *Os pubis* are two distinct Bones in a Child, but unite into one in a Man: the *Epiphysis* of the *Os femoris* is a distinct Bone from it in a Child, whereas in a Man they do intirely unite. But custom and the usage of Authors hath found out another sense of the word, fitted to adult persons; in whom it is used to mean such a Connexion of two Bones together as is immovable: and of these are two sorts.

1. An immediate Conjunction, or Juxtaposition, (if I may so call it,) without the interposition of any other Body. Of which we find three Species.

First, *Sutura*, or the indented Conjunction of Bones in the Scull.

Secondly, *Harmonia*, when without toothing or interfering they do joyn immovably in a straight line; as the Bones in the upper Jaw.

Thirdly, *Gomphosis*, or the Connexion of a Tooth to its Socket.

2. Mediate, where the Connexion is made by interposition of another Body. Of these we likewise find three sorts: which notwithstanding are not so peculiar to the *Symphysis* as it is opposite to *Articulatio*, but that they may be found in that also. They are these that follow:

First, *Syffarcosis*, when two Bones are joyned together by the intervention of Flesh. An instance of this in the *Symphysis* is, the Conjunction of the Teeth to the Mandible of the Flesh of the Gums. In Articulations we see it in the Elbow or any other Joint, where one Bone is connected to another by Muscles.

Secondly, *Synneurosis*, when the Connexion is made by a Ligament. Of this in *Symphysis* we find instances in the Connexion of the *Ossa pubis* together, especially in Women, by a ligamentous substance. In Articulations it is either round, as that which unites the head of the *Os Femoris* to the *Coxa*; or broad, as the Tendon of the *Patella*, which unites it to the *Os tibiae*.

Thirdly, *Synchondrosis*, which is an Union by Gristles. A *Symphysis* of this kind we have of the *Sternon* to the Ribs. Articulations are most of them so joyned, there being, few Bones destin'd for motion which have not cartilaginous heads for the facility thereof. These two latter sorts of Union are compounded in some Articulations; as in the *Ossa coxae*, where you have Tendons and Gristles both to joyn them together. This is by *Galen* called *Neurochondrosis*.

II. *Articulatio* is a Connexion of Bones with aptness of Motion. Something hath been anticipated already concerning this Head, because of its coincidence with *Symphysis*, in the forementioned instance. But take it as it is in itself, and you will find it to have this difference. There is,

1. A conspicuous Motion, which where it happens, the Conjunction is called *Diarthrofsis*; as in the Elbow, Thigh, and Knee.

2. An obscure one, where the Conjunction is called *Synarthrofsis*; as in the joyning the *Carpus* to the *Metacarpus*, the *Tarsus* to the *Metatarsus*: And both these are divided into three following Species.

First *Enarthrofsis*, where a good round Head enters into a Cavity: whether it be *Cotyla*, or profound Cavity, as that of the *Os coxa* receiving the head of the *Os Femoris*; or Glene, which is more shallow, as in the *Scapula* where it receives the *Humerus*. Of more obscure motion is that Connection of the *Os tali* with the *Cymbiformis*, which is an *Enarthrofsis*.

Secondly, *Arthrodia*, where the Cavity is very superficial: as between the head and the first *Vertebra* of the Neck, in *Diarthrofsis*; and between the *Carpus* and *Metacarpus*, in *Synarthrofsis*.

Thirdly, *Ginglymus*, which is a mutual Indenting of two Bones into each other's Cavity: of which the Elbow is an instance, in *Diarthrofsis*; the *Vertebra* of the Back, in *Synarthrofsis*.

Many other things might be said on this subject, were it pertinent to my present design, which is only to regard the Union and due Conformity of Joints, in order to the Doctrine of Luxations, in which the Articulations are chiefly concerned. For when those that are united by *Symphysis*, as the Sutures of the Head, and the Bones of the *Maxilla superior*, are dislocated, there is always a Fracture con-comitant, and the whole is treated as a Fracture. When the Teeth are dislocated, or to be dislocated, a Tooth-drawer is consulted.

Articulations therefore, whether by *Diarthrofsis* or *Synarthrofsis*, are the Subject on which my present Discourse concerning Luxations is founded.

Definiri-
on of a
Luxation.

When therefore two Bones, which being naturally united make up a Joynt, are separated from each other, we call it a *Luxation*.

The Ancients called it a Slipping of the Head of a Bone out of its Cavity. Which is true of the great Joynts, but not of all: for the broad end of the Cavicle, where it resteth upon the *Scapula*, hath neither Head nor Cavity, yet is capable of Luxation.

Differen-
ces.

Luxations admit of several *Differences*.

1. From the Subject; *viz.* whether it be a place of obscure motion, or a manifest one. An instance of one is, when the Clavicle recedes from the *Scapula*; which the *Arabians* call a Disjunction. Of the other, where an Elbow, Shoulder, &c. is disjoynted; which is most properly termed Luxation. There is also a peculiar Luxation proper to Children, *viz.* when the *Epiphysis* of a Bone separateth from the Bone, they being not thoroughly consolidated into one; which however is treated like a Fracture, and consequently deserveth no place in this Discourse.

2. From the Degree of it; whether it slip out wholly, or only in part, *viz.* to the margin of the Cavity that containeth it. To this latter sort may be referred those Elongations which are the effect of an Humour soaking upon a Ligament, (as that of the *Coxa*; thereby making it liable to be stretched, and to be thrust quite out upon every little force.

3. From the situation and Figure of the Part, as whether upward, downward, forward, backward, on the right side, left side, &c. of which more in the following Chapters.

4. Differences may also be taken from Accidents attending them; as Inflammations, Wounds, Fractures, &c.

Causes.

Causes of Luxations are internal, or external. The internal are the Humours which affect the Joints, and either by relaxing the Ligaments give way to the Bone to depart from its natural seat; or by a contraction of the Tendons

dons put it upwards out of the Cavity. Both these sorts I have seen in Children, and it's likely it was in some of them hereditary; as *Sennertus* hath well observed, *à gibbosis gibbosus, à claudis claudus generari*. The external Causes are, Blows, Falls, violent Extension: in which latter cases Infants sometimes suffer by the hands of Midwives, or at more age by the negligence of Nurseries.

The Signs of Luxation may be taken from the loss or imperfect motion of the Joint, and from the different resemblance it hath with the contrary sound Member; there appearing to the eyes or touch a Cavity in the Part whence it was receded, and a Protuberance where it is lodged: the Member is also rendred longer or shorter, as the Bone is distorted.

The Signs of Reduction are contrary to what have been before delivered. There is also a crashing noise made by the Bone in its return to the Cavity. But this is not always certain; for it may proceed from an Eruption of some part of the margin of the Cup or Cavity. In which case the Luxation is for the most part rendred incapable of Restitution. But this Fracture maketh a different noise from the other, and may be easily distinguished by the discerning Artift.

In Children and moist Bodies luxated Bones are easiest reduced, but are with great difficulty retained: in elderly and dry Bodies the contrary happens.

Luxations of long continuance are difficultly reduced, and are for the most part as hardly retained, the parts growing emaciated. Those of the *Vertebrae* occasioned by external Accidents are for the most part mortal: whereas some of those by Congestion are frequently cured.

The Bone luxated maketh compression on the neighbouring Parts whither it slippeth; and accordingly as those Parts are of more or less sense, so are the Pains and Accidents that attend it. You ought to hasten the restoring it to its place as soon as may be. The work is purely Chirurgical, it having no dependency upon Nature, but the Extension and forcing back of the Bone into its proper seat is done by the Hands of the Artift. There are four Intentions necessary to the Cure: 1. Extension, 2. Reposition, 3. Deligation, 4. Collocation, or placing of the Member in a right Position.

Extension is first required, because of the situation of the Bone, which being out of its due Socket rendreth the motion of the Muscles useles, or rather hurtful, which the more they pull the Bone, the more they distort it, and contract the Joint. This therefore cannot be committed to Nature, but requireth manual Operation.

The Extension being well made, you are at the same instant to restore it to the place it fell from. And to do this, you must consider well the luxated Joint, and which way it slipped out; for it requireth to be returned in the same manner. If it lie on the right Side, it must be prest back to the left: and so if it be luxated forwards, it must be forced backwards. The Shoulder requireth one way, the Elbow another, and the Knee or Ankle another. If the Luxation hath been of any continuance, or if the contraction of the Muscles be great, it will be reasonable that you first relax them by emollient Embrocations, *viz. unguent. dialthea, axung. human. &c.* lest by your violent forcing in the Bone you affect the Nerves, and cause a *Paralysis*, &c.

Being satisfied in the Reposition of the Bone, you shall then take care to keep it so: and that is performed by Deligation. But before you make the Bandage, you ought to apply such Medicaments as have vertue to resist the Influx of Humours, and strengthen the Part: and those are Astringents, and such has have been proposed in the foregoing Chapter of Fractures; *viz. bot.*

Armen.

Armen. sang. dracon. farin. volatil. balauſt. flor. roſ. rub. cum albumin. ovi. aceto, aut vino rub. If there be great Pain, you may embrocate *cum ol. roſ. lumbricor. maſtichin.* and apply *empl. è bolo, diapalm. de minio, &c.* Then place a Compreſs wrung out of ſome of the aforeſaid Liquors on that Part whither you ſuſpect the Bone may again tend, and roul it on cloſe accordingly as you ſee occaſion.

4. Inten-
tion.

The laſt Intention is Collocation, or placing of the Member; and that ought, for the eaſe of the Patient, to lye ſoft, and ſomewhat raiſed up, neither much extended, nor too much bent, a middle figure being beſt to prevent Pain. Yet if it be the Shoulder that is luxated, the Elbow ought to be kept to the Side, and the Hand upon the Breſt. If no accident happen, you muſt not dreſs it again till the ſeventh day; and then you may alter the Poſition, and move the Joint a little to and fro, and dreſs it up with ſuch Medicaments as may give a breathing to the Humour, and corroborate the weak Joint. In caſe it itch, bath it with Salt water; otherwiſe with a Decoction *ex ſummitat. abſinth. flor. cham. roſ. rub. balauſt. bacc. myrtil. juniperi, nuc. cupreſſi, &c.* to which may be added *ſpir. vini.* All greazy Applications relax the Tendons, and prolong the Cure.

Luxations made by Congeſtion do require Emollients to reſolve and breath forth the crude Humour affecting the Joint, Ligament and Tendons: to which purpoſe *Rx rad. althææ. ʒvi. rad. cucumeris aſinini ʒiiij. ſummitat. majoran. Mij. coctis in brodio ex pedibus vitul. & contuſis adde pulv. ſem. ſennegræci & lini an ʒj. ol. lilior. axung. human. an. part. æq. fiat Cataplaſma.* You may alſo uſe *empl. diachyl. cum gummi, de mucilaginibus, de ranis cum Mercurio, &c.* That Matter being thus reſolved, you may then proceed in the Reduction of the relaxed Bone: and after you have reduced it, apply ſuch Medicaments to it as may dry up the ſuperfluous Humidity, and ſtrengthen the Joint: of which ſort I have given you an example in the fourth Intention. There will be alſo required ſome extraordinary Bandage to retain the Bone in its place: but of that I ſhall have more fitly occaſion to diſcourſe in ſome of the following Obſervations, as alſo of *Paralyſis, &c.* which frequently attend great Luxations.

C H A P. III.

Of Luxation of the lower Jaws.

Proceſſes
of the Jaws
deſcribed.

THE Proceſſes of the lower Jaws are two on each ſide.

1. One more acute, called by Anatomists *Corona*; which hath no Socket properly ſo called, but playeth in the Hollow of the Cheek according to the motion of the Temporal Muſcles, whoſe Tendon is inſerted into it.

2. Another more obtuſe with a roundiſh Head, called *Condylus*. This hath for its Socket the firſt *Sinus* of the *Os temporum*, in which it moves; and is kept cloſe to it by the Muſcles which lay hold on either ſide of the *Corona* before mentioned, as the Temporal, or of the outward broad Angle, as the *Maſſeter*, or the inſide of the broad part of the Jaw, as the *Pterygoides*. Theſe Muſcles by their perpetual tendency to a contraction (which is the nature of all Muſcles,) keep the Bone ſteady in its ſituation; but much more ſo when they are voluntarily contracted for Maſtication, Speech, &c.

It is remarkable, that though Nature hath made our Muſcles to open the Jaws, as well as theſe to ſhut them, yet they are in themſelves ſlender, and not inſerted into this part of the Jaw, but quite before at the Chin,

ſo

so that in their motion they do not pull down this part of the Jaw, but the fore-part only: whereas the attollent Muscles, being laid nearer to the *Condylus* on each side, keep them so close to their Sockets as to make them a Joint, or center of motion: from whence according to the custom of Levers and Balances, it falleth out, that those little digastrick Muscles, by being applied to the remoter part of the Jaw, which maketh the circumference, become equipollent to all the bigger Muscles before mentioned; nay, are sometimes so valid, that upon over-stretching, as in Gaping and Yawning, they pull the *Condylus* out of its Socket. Sometimes the attollent Muscles themselves do pull it, when we violently gnaw any large Bone, Gristle, or other thing that is hard, and withall so big as to be necessarily detained in the fore-part of the Mouth.

This Luxation can be made but one way, *viz.* when it slippeth over the fore-side of the *Sinus*, and passeth into the Cavity of the Cheek under the *Os jugale*; it being so defended by Bones, that other ways are impossible without a Fracture.

When this Luxation happeneth, the lower Jaw is thrust forward, the Teeth are prominent beyond those of the upper, the Patient can neither swallow nor speak, nor chew, nor indeed shut his Chaps. If you see him presently before any Tumour supervene, you will find the Temporal Muscle rigid. If one side only be dislocated, the Mouth is distorted, as if the Patient had a *Spasmus*; the fore-part of the Jaw is thrust down on one side, &c.

The Reduction of the Jaws is said to be difficult, and that if they be not timely reduced, ill Accidents do happen, *viz.* *Paralysis*, Strangulation, &c. To which I can only say, that I never met with any difficulty in the replacing them, nor yet saw any such Accidents as by Authours are mentioned: but certainly they are in danger of famishing, for they can neither eat nor drink while the Jaws are luxated.

In order to the Reposition of the Jaws, the Patient ought to be seated firm, and his Head held steady, lest it start back in the time of Reduction. Then place a couple of Wedges of Wood close between his great Teeth, as far as you can thrust them, and your Thumbs close by them, and your Fingers externally under both the Jaws, extending them moderately; and at the same instant press the farther parts of his Jaws downwards, and raise up the forepart. If his Teeth be too sharp for your Thumbs, put a fold of Linen between. If only one of the Jaws be luxated, move to the contrary side, and keeping it in that posture, place your Hand as aforesaid, with your Thumb upon his great Teeth, pressing that part downwards, and raise the fore-part upwards by a quick moderate Extension, and you shall feel it reduced, and may conclude it so by the equal meeting of his Teeth, and by the opening and shutting of his Mouth, also by his ready Speech. If after Reduction you suspect his Jaws may prolapse, you may apply a Defensive with Bandage; or in case of Pain, embrocate the Temporal Muscles and Parts about with *ol. lumbricor. mastichin.* &c. But hitherto I never saw occasion to apply any thing.

A Woman aged about fifty six years was sent to me from a worthy Lady in a neighbouring Country: both her Jaws were luxated, the obtuse Processes of them were split forward and shot under the *Os jugale*, and her Chin was thrust forward and inclining down towards her Collar-bone. She had been so three days, during which she could neither eat, drink nor speak. I placed her in a Chair, and Dr. *Lenthall*, who came with her, held her Head. Then I placed my Hands on the outside and under her Jaws, and my Thumbs upon her great Teeth, with a Compress of soft linen under each; and whilst I pressed

Signs of Jaws luxated.

Prognostick.

Reduction.

1. Observation of a Luxation of both Jaws.

sed hard down the farther parts of the Jaws, I raised up her Chin, and reduced them in a moment: and to satisfy her that they would not slip down again upon an ordinary motion of them, I persuaded her to eat and drink; then dismissed her without application of Plaister or Bandage.

2. Obser-
vat. of a
Luxation
of the
right Jaw
A Gentleman of about forty years of age, of a sickly weak Constitution, had his right Jaw distorted, by which his Mouth being drawn awry, it was supposed a *Spasmus*, and various Applications had been made to that purpose. One morning, walking amongst my Patients, I met his Apothecary, who telling me the case his Patient was in, I replied, his Jaw was certainly luxated: upon which I was the next day consulted, and saw it so. I laid my Hand on the outside of that distorted Jaw, and placed my Thumb with a Rag wound about it upon his great Teeth as far as I could thrust it, and laying my other Hand upon his sound Jaw, I drew the distorted one straight out; and whilst I pressed down the hinder part, I made Extension, raised up his Chin, and reduced it. He did not at that instant believe it, but he was soon after confirmed by the use he had of it. It continued well without any manner of Application to it.

CHAP. IV.

Of Luxation of the Clavicle, or the Collar bone.

The Clavicle described.

THE Clavicle is a crooked Bone made in the figure of an *f*. one end of which being thicker, and almost three square, is inserted into a Cavity purposely fitted for it in the first Bone of the *Sternon*, and bound in by a strong ligamentous Membrane. The other end, being broad and flat, is joyned to the *Acromium*, where it not only serveth to keep the Shoulder at due distance from the *Sternon*, but also assisteth those several Processes which are provided by Nature to preserve the Shoulder-bone from slipping upwards from its Cavity.

This Bone is capable of a double Luxation, one at the *Sternon*, and that only outwardly, where it riseth from the Breast, and lieth like a Lump. The broad end near the *Acromium* is also subject to a twofold Luxation. *viz.* upward, and forward; being defended from all other Distortions by its neighbouring Bones.

Cause and Sign of a luxated Clavicle. Prognosticks.

This Luxation is for the most part occasioned by a Fall and pitching upon the Shoulder. It is discerned by the Prominence it maketh.

The Clavicle is not so subject to Luxation as other Bones; but being luxated, it is most difficultly retained after Restitution, by reason of the smoothness of its heads, and the little hold they have upon the *Acromium* and *Sternon*: And if it be not restored, the use of the Arm is impaired in some of its motions.

Reduction.

The Reduction of the Clavicle, which end soever it be luxated, must be made by drawing that Shoulder backwards, and by passing the luxated end even with the *Acromium*, or to the Cavity of the Bone of the *Sternon*, whence it departed. Neither of the places affordeth it much room, therefore it will require your greater care: For if you place it not exactly, it will scarce hold right till you make your Applications. Therefore you must have ready Emplasticks, Compresses, and Bandage. Splinters are also of use, whether they be of Pastbord, the Scabbard of a Sword, or Tin. The Bandage ought to be a Rowler with two heads to come over the Shoulders, and under the Arm-pit, making so many Circumvolutions as may retain the Dressings close.

close. This being well made, his Arm must be kept up with a Napkin or Towel, and his hand placed upon his Breast. If all be well, you ought not to loosen the Bandage till you judge it united, which may be guessed at by the ease and use of that Arm.

I Was fetched to a young Fellow, who by a Fall from his Horse was supposed to have broken his left Shoulder. Upon view of it, I saw the end of the Clavicle separated from the *Acromium*, and lying prominent without any manner of Fracture; but the head of the *Os humeri* was bruised, and remained fugillated long after. I caused one standing behind him to pull back the *Scapula*, and with my hands forced down the end of the Clavicle, and placed it to the *Acromium*; then applied an Emplaster of astringent Powers mixt *cum. album. ovor. &c.* over the Clavicle and Shoulder, with a piece of Pastboard wet in *aceto* and Whites of Eggs; over which I applied a dry one, and upon that a Compress wet with some of the former Liquors, and rowled it on with Bandage as abovesaid; then wet that part of it over the Clavicle with whites of Eggs, to strengthen it and retain it firm. That done, his Shirt and Doublet were put on, and his Arm tied up, as hath been said. Then I put him to bed, and let him bleed in the Arm, and kept his Body soluble by lenient Purgatives. After he had lain four or five days in bed, I observing the Bandage tight, and the pain and accidents diminish'd, permitted him to rise, and walk up and down in the house. About the eighteenth day I took off Dressings, and saw the Bone right in its place, the Parts about being only marked with the extravasated blood. I embrocated them with *ol. lumbric. & spir. vini*, and applied an *emplast. stict. Paracelsi & diapalma*, rowling it up as before, and from that time dressed it no more, but saw him afterwards well abroad.

1. Obser-
var. of a
Luxation
of the
Clavicle.

Another having by accident of a Fall in wrestling started the end of the Clavicle from the *Sternon*, I made Extension after the same manner as abovesaid, by pulling his Shoulder backwards, and pressing the while with my hands upon that end of the Collar-bone, till I had replaced it, then dressed it as aforesaid. But the next day, finding the Patient in Pain, and the Dressings raised up, I concluded the Bone distorted. Whereupon I caused a Tin-plate to be made in the form of the Clavicle, and to reach from one Shoulder to the other, cut at the ends, to receive the forepart of the Shoulders and keep them out. Then I took off Dressings, and restored the Bone again to its place, and repeating the former Applications, placed the Tin plate over the Compress, and rowled it on close. This Plate sat easy, and served to keep out his Shoulders, also retained the Bone in its place, whereby he was happily cured without more dressing.

2. Obser-
var. of a
Luxation
of the
Clavicle.

CHAP. V.

Of Luxation of the Shoulder.

THE head of the Shoulder-bone being round is inserted into so shallow a Cavity in the *Scapula*, that were there no other Guards for it, it would fall out or be thrust out almost upon every occasion. But Nature, that found that shallowness necessary to the variety of motions which is intended for the Joint, found other ways of securing it from running out. *Viz.* 1. upwards it is prohibited from an excursion by the *Acromium*, the Process *anchriformis*,

Descripti-
on of the
Shoulder-
bone.

and the broad end of the Clavicle, which reaching over the latter to the edge of the former, addeth to the strength of the place. Nor is this all, for Nature hath made a strong Ligament which reacheth transverse from the Process *anchrifomis* to the *Acromium*; and to confirm all, hath laid underneath these not only a strong circular Ligament, which involveth the whole head of the Shoulder, (being indeed a collection of the Tendons or Muscles, which lying under and upon the *Scapula* particularly serve for the motion of the *Humerus*, or else lying upon the *Humerus*, do take their origin from the *Scapula*;) but also a Tendon of one of the heads of the *Biceps*, which passing through a peculiar Notch or Trench of the *Humerus*, inserteth it self into the head of the *Scapula*. Over all these lieth the *Musculus deltoides*, binding all in so strongly, that if the Elbow chance to be so pushed that it forceth the *Os humeri* upon this Fortrefs, it sooner breaketh into shivers than maketh a way through. 2. The principal Guard it hath from falling inwards and downwards is its pendulous posture, together with the many Muscles that keep it in that posture, and chiefly the Tendon of the *Biceps externus*, (as it is called in our Hall) and of the *subscapularis*, with the *rotundus minor*. Yet are not these so strong, but that between the Tendon of the *subscapularis* and the *Biceps externus* it is apt to flie out into the *Axilla*. All other ways are so barricadoed with Bones or Tendons, that the Luxation is very difficult: yet I have seen it lie forward somewhat under the Pectoral Muscle; but whether it was forced thither in their attempting to reduce it out of the *Axilla*, I cannot certainly say, but do suppose it might.

Causes of
Luxation
of the
Shoulder.

The Causes of this Luxation are for the most part external, by some violent force, either in Wrestling, Running, or by a Fall from a Horse, or the like. In the time of War it may happen by the force of great Shot or Splinters. Some instances whereof you may see in the Treatise of *Gun-shot*. But it sometimes happeneth from an internal Cause, *viz.* a Catarrh or Fluxion of Humours upon the Muscles or Tendons, which gradually relaxeth them to such a degree, that the head of the *Os humeri* slideth down into the *Axilla*.

Signs.

Its descent into the *Axilla* appeareth by an unusual Cavity in the head of the *Scapula*, where it naturally is full and round. You may also feel the head of the *Os humeri* lying in the *Axilla* hard and round: the Patient's Elbow hangs from his Side, and cannot be brought so close as the sound without great Pain, nor can he bring his Hand to his Mouth, nor stretch it upright against a Wall. If the head of the Shoulder be distorted forward, that part will appear prominent, with an unwonted Cavity behind, if you compare it strictly with the other Shoulder: the Elbow also hangeth backwards, and will not endure to be brought forwards.

If the Luxation be made by a Relaxation of the Tendons, the Patient's Complaint will inform you, and the Emaciation of the Arm will make the foresaid Symptoms more apparent.

Prognostick.

Luxation of the *Os humeri* from an external Cause is not very hard to reduce in Children or soft Bodies, if timely undertaken: but contrary in elderly People and tough musculous Bodies: and such are frequently slow in recovery of their former Strength and Motion. Sometimes a *Paralysis* seizeth them, and they emaciate: but by timely Endeavours they do recover. If in the Reduction or otherwise any part of the *Capsula* chance to be fractured, the Retention of the *Os humeri* is not an easie Task. Luxations made by Fluxion may be easily reduced, but are most difficultly retained in the *Capsula*.

Reduct.
by Hand.

The Reposition of the luxated Shoulder is performed either by the Hand, Bandage or force of Instruments. He that will reduce it by Hand must put it in a motion contrary to that it went out by. In its going out, it is first thrust or

or pulled forwards, till it come beyond the Edges of the *Cupula*; then it falleth down below the *Cupula*, and is by the Muscles pulled backward. He that will reduce the Bone this first way must reverse these Motions; *viz.* first bring it forward, then upward, then thrust it in. By the observing this method I have reduced the Shoulders of Infants and little Children so soon, that the Standers by have heard them knap in before they knew they were out. But the way of reducing the Shoulder in those of more growth must be, if done by one Man alone, by placing the Patient in a low Seat, and clapping his Fingers under his Arm-pit, his Knee or Thighs to the out-side of his Elbow, and his Head to the point of his Shoulder. By his Fingers strongly bent together, he pulleth the Bone both forward and upward. By his Thigh or Knee pressing his Elbow to his side, he doth likewise help to raise it and bring it forward. The pressure of his Head keepeth down the *Scapula*, that it may not rise with the Bone. But because this Application of the Knee, Head, &c. is not easily practicable but upon little and slender Men, we generally commit the pressing of the Elbow towards the Ribs to another Man.

After this manner the Elbow is brought quit back to the Spine: which being done, his other Hand must be placed under the *Axilla*, to raise the head of the *humerus* forward and upward, whilst the Chirurgeon with his Hands presseth down the *Scapula* to receive the Bone:

When the Head of the *Os humeri* lieth distorted forwards under part of the Pectoral Muscle, the Patient's Elbow must be drawn backward, and held close to the Spine, whilst the Chirurgeon presseth with both his Hands forcibly upon the Head of the Bone.

There is yet another way of restoring the luxated Shoulder by the Hand thus: You are to make choice of a proper lusty Fellow on whose shoulder you must hang the Patient by the luxated Arm, bringing his Hand over to the Fellow's Breast. If the weight of the Patient be not sufficient to make the Extension, some other body may hang upon him, or pull him by the Legs downward.

But because these ways of Reduction by the Hand are not always feasible, especially in strong muscular People, we therefore make use of Bandage and several sorts of Engines: The most common way of Bandage is by that of the Girt, which Girt hath a Bolster in the middle, and the ends are tack'd firmly together. In the use of it the Patient must be placed so, that part of the Girt with the Bolster is to be placed under the Arm-pit, and the other part over the Chirurgeon's Neck, that he may thereby with all his Force raise up the head of the *Humerus*: which that he may the better do, his Assistant must sit behind the Patient, and pull his Arm backward with all his Might; and if the Chirurgeon presseth with his Hands upon the Head of the *Scapula* at the same time he raiseth up the *Humerus*, he shall reduce it more easily.

There is another way of Reduction by Bandage, and that is, by laying the Patient flat on his Back on the Ground, the Chirurgeon sitting behind him, and making Extension by the foresaid Girt or other Bandage placed under the *Axilla*, while his Assistant lieth along at the Patient's Side, and presseth with his Heel upon the foresaid Bandage, and at the same instant taketh the Patient by the Hand, and pulleth his Arm with all his Force. Thus by their several Extensions the Head of the Shoulder-bone may be raised and reduced.

Instruments proper for the reduction of the luxated Shoulder are, Ladder, Coultstaff, Pulleys, *Glossocomium*, &c.

The way of Extension by a Ladder is, that the Patient climb up three or four Steps of it, and put his lame Arm over one of the Staves, placing it

Reduct.
by Band.

Reduction
by Instru-
ments.

between his Side and the Head of the *Humerus* : and that a strong Fellow take hold of that Arm, and pull it forcibly down backward, whilst the Patient hangeth by it.

The way by a Coulstaff is safer. The Staff must have a Bunch in the middle somewhat Wedge-like, and covered with a soft Bolster, fit to place under the Patient's Arm-pit. In order to the Extension, the Patient must be seated near some Post or Pillar, in which the Pully must be fastened to extend his Arm ; and the Bandage must be made a little above the Elbow : which being fastned, and the Coulstaff placed, and supported by a couple of Fellows, the Chirurgeon must stand on the contrary side, with his Hands on each side of the *Scapula*, to press it downward, and keep the Patient firm in his Seat, and govern the Operation, taking care that the Wedge be placed right whilst the Extension is making, lest they break the Bone or otherwise mischief him.

The *Glossocomium*, commonly called the Commander, is of use in the most strong tough Bodies, and where the Luxation hath been of long continuance, and will not yield to the other ways of Extension. There ought to be great care in the use of it, for many shrewd Accidents have hapned thereby.

The *Humerus* luxated by Relaxation of the Ligaments and Tendons is restored to its place after some of the ways abovesaid, but doth require your Industry to retain it after it is reduced : more of which by and by.

i. Observ.
of a luxa-
ted Shoul-
der.

A Lady going one evening out of her Coach into her House, trod upon her Gown and fell down. I being fetch'd, found her sitting in the same Room grievously complaining of her right Shoulder. Looking upon it, and feeling the Head of the *Humerus* lying in her Arm-pit, I endeavoured to reduce it by Circumrotation ; but it not yielding thereto, I caused one of her Servants to pull her Elbow back towards the Spine, then to thrust it forward. During which I stood on the contrary side, with one of my Hands upon the Head of the *Scapula*, and the other under the *Os humeri*, and at the same instant my Assistant thrust it forward. I forced it into its place : the People standing by heard it knap in, and the Patient declared it by the Ease she felt. Then I applied an *empl. à bolo* round the weak Joint, with a proportionable Compress wrung out of *Oxycrate*, and rowled it on. After which her Servants led her to her Chamber to bed. The next morning I visited her. She had rested well, and was so easie, that her Physician, Sir *W. Gideon*, would scarce Believe that the Bone had been luxated. The Lady prepared to remove to her Country-house, and undertook the Cure her self by some Plaisters of her own. But during the Application of them her Arm grew weaker, and emaciated very much, and was painful about the Insertion of the Muscle *Deltoides*, and so to her Hand, with a numbedness in some of her Fingers. Whereupon she returned back, and consulted Physicians. One whereof, supposing the Bone still dislocated, advised the consulting a Bone-setter. I being present, he acknowledged the Bone well set. What he would have said had I been absent, may easily be guessed by his former dealing with others of my Profession. From that time Antiparalyticks were prescribed, a Fontanel was made in that Arm near the Muscle *Deltoides*, also Embrocations and Plaisters were externally applied ; whereby she recovered the use of her Arm.

2. Observ.
of Reduct.
by Foot.

A Nobleman who was a Commander of Horse in that Army which came out of Scotland into England, was by some accident thrown off his Horse, and would not be raised off the Ground till I came. He complained of his Right-shoulder. I looking upon it, felt the Head of the *Humerus* lie distorted in his Arm-pit.

Arm-pit. I endeavoured to reduce it by my Hands, as above in the former Observation; but it not yielding thereto, I caused Mr. James Davies, who was Chirurgeon to those Guards, to pull off his Boot from his right-leg, and to lie along upon the Ground by his Lordship, to make Extension that way. Whilst he was making ready, I clapt a Compress under the Patient's Arm-pit, with a Towel over it, and placed my self at his Lordship's shoulder, and made Extension by the Towel, whilst the Assistant took the Patient by the Hand, and thrust his Heel into his Arm-pit with all his might. We having thus reduced the Bone into its place, I applied an *emplastrum à bolo* over the Shoulder, and a Compress of Tow pres'd out of *acetum* under the Arm-pit, and rowled them on. That done, his Servants made him ready, and helpt him upon his Horse. I made him a visit that night at his Quarters, designing to let him blood in the contrary Arm: but his Shoulder being easie, and not hurt in any other part, I took my leave of him, telling him his Shoulder ought not to be dressed till after six or seven days. But this person forgetting what I had said, thought himself neglected, and complained to his Superiour Officers of me. Whereas in truth, if the Bone be well set and bound up, it is not material whether it be any more dressed or no. Thus in an Army we are frequently rewarded, if we do not attend them as their menial Servants.

One morning Mr. Fancett, Chirurgeon to his Royal Highness, sent to my house, when I lived in the *Old Baily*, to come to him into *Black fryers*, to help him to reduce a luxated Shoulder of a Man lodged there. The Head of the *Humerus* was fallen down into his Arm-pit. The way of Reduction proposed by Mr. Fancett was by a Girt. We placed the Man on the ground, and that part with the Bolster under the Man's Arm-pit, and put the Girt about Mr. Fancett's Neck, who stood over him with his Hands upon the *Scapula*; and whilst I drew the Patient's Elbow backward close to his Spine, and thrust the head of the *Humerus* upward, Mr. Fancett raised up the head of the Bone with all his Force, and it knapt in. The Bone being thus reduced, Mr. Fancett slipt the Girt off his Neck, and dress'd up the Man's Shoulder with Astringents and Bandage, as hath been said.

In the year 1657. whilst I was riding to a Noble Family in the North, I was desired upon the Road to make a visit to a Man who had some days before put his Shoulder out of joint. I did so, and saw his Arm miserably stript of its *Cuticula* by the Bandage which the several Bone setters had endeavoured to make the Extension by; yet the Bone lay lodged in his Arm-pit. I applied over his Arm *cerat. Galeni*, and gave direction to have a Coulstaff made ready against next morning, with a Wedge-like prominence in the middle of it, covered with soft Cloaths; and that the Bone-setters should meet me at the Patient's house. The next morning we met, and having all things ready, I caused the Patient to be seated with his luxated Arm near a strong Pillar which supported part of a Mantle-tree; then took off the Dressings, and fomented and embrocated his Shoulder with Emollients; then folded a Cloth about his Arm a little above his Elbow, and fastned a Bed-cord over that, and tied the ends of it about the Pillar, and with a Bed-staff twisted it, shewing one of the company how to twist it, and make extension of the Arm by it. Then I placed the Coulstaff with its Wedge, close under the prolapsed head of the *Humerus*, two strong Men the while supporting the ends of the Staff proportionably high, I standing on the contrary side with my hands on the *Scapula* to draw it back, and press it downward to receive the head of the *Humerus*, and to govern the Operation, the Bone-setters looking on. All things being thus ready, the one twisted the Cord, and thereby extended the Arm; the other held the Coulstaff firm and Close to his side. During the Extension our

3. Observ.
of Reduct.
by Hand.

4. Observ.
of Reduct.
by Coul-
staff.

Pati-

Patient roared, and one Bone-setter called to me to forbear the Extension, saying, *Why will you strive against the Lord?* and turned from us, declaring that I would kill the Man. But the head of *Humerus* was then moving; upon which consideration I bid the Man twist on: and at that instant the Bone knapt in, and we loosened the Bandage; then dress'd it up with *empl. è bolo* with Bandage, and put him to Bed. There being little more required, I went on my Journey.

5. Observ.
of Reduct-
tion by a
Pulley and
Coulstaff.

In the year of the great Sickneſs, whilst I was in the North-country, a Gentleman sent his Servant to me, who had some half a year before luxated his Right-ſhoulder. He had been with a Bone-setter, who took some pains in stretching it, and made him believe he had set it: but upon sight of it, I concluded it luxated, and felt the head of the *Humerus* lying in his Arm-pit. I being then lame of my fractured Leg, and indisposed with coughing blood, advised the Man to return to his Bone-setter, and tell him what I had said. He did so, and travelled from one Bone-setter to another. Every one of them attempted the Reduction, and pretended they had set it. But the Patient returning still to me with it unset, I sent for a Pulley, and causing it to be fixed to a strong Post, and a Coulstaff to be held under his Arm-pit by two strong People, we made Extension of the Arm, and reduced the Shoulder, as in the former Observation hath been shew'd, without much difficulty. Then I dress'd it up with a restrictive Emplaster and Bandage as abovesaid, and he recovered the use of his Arm.

6. Observ.
of Reduct-
tion by
Glossocom-
mum.

The deceased Mr. *Edm. Molins* and my self were sent for to a Fencer who had put his Shoulder out of Joint. We endeavoured to reduce it by the help of the Girt and our Hands: but he being of a strong muscular Body, we could not move it. We therefore embrocated the Shoulder *cum oleo ex ped. bovinis*, and dress'd it up with *cerat. dialthiææ*. The next day we came prepared with a *Glossocommum*, well known to the young Chirurgeons by the name of a Commander, and reduced the luxated Bone; then dress'd up his Shoulder as abovesaid. This foresaid Instrument is frequently used in reducing these Bones in strong tough Bodies, and where the Luxation hath been of long continuance: but the use thereof requireth great Caution, for sometime sad Accidents have happened thereby.

Luxations from internal Causes are for the most part irremediable: yet I shall give you a couple of Instances of my Attempts therein.

7. Observ.
of Luxati-
on by Con-
gestion.

A young Woman having been long diseased with a Pain in her Right-ſhoulder, with an Emaciation of that Arm, came to me recommended by Dr. *Chamberlain* Sen. Her Shoulder seemed to me luxated; but her Chirurgeon not being of that opinion, I declined the meddling with her: yet being afterwards solicited by some of her Friends, I sent her to a Chirurgeon's house, who was one of the Masters of Anatomy, whither I followed, and met several Masters of that Faculty there at a private Dissection. They together viewed and felt her Shoulder, and unanimously concluding it luxated, prepared for the Reduction of it; and having reduced it by Pulley and Coulstaff, dress'd it up accordingly. But the Ligaments and Tendons were so relaxed, that afterward upon slacking the Bandage it relapsed.

8. Observ.
of Luxati-
on by Con-
gestion.

A Child of about four years of age having had his Left-ſhoulder luxated from his Infancy, the Arm emaciated and grown useless, I being at last consulted did presently reduce it by lifting up the Head of the *Humerus* with my Finger: but the Tendons being extremely relaxed, the Bone slipt down again as soon as I removed my Fingers. Wherefore I sent for Mr. *Smith* a Truss-maker, and appointed him to fit the Child with a pair of Bodice stified on the lame side, wherein was fix'd a Bar of Steel with a Head like a Soldier's Rest

Rest, which by a Screw was raised proportionably to support the Head of the *Humerus*. This being made I placed a Fontanel in that Arm and rowled up the other Arm from the Hand to the Shoulder, and braced it to his Breast, designing thereby to force Nourishment into the lame Arm and necessitate him to use it. But the Child growing froward they set it again at liberty. Upon notice thereof I deferred farther proceeding in the Cure, till the Child should be more governable; advising the Parents to repeat the use of the former Prescriptions of their Physicians as they should see occasion.

C H A P. VI.

Of Luxation of the Elbow-joint.

THE Joint of the Elbow is made by the Concurrence of three several Bones: 1. the *Os humeri*, 2. the *Ulna*, 3. the *Radius*. The *Os humeri* ends broad towards the Cubit with a double Head, the inward fitted for the reception of the *Ulna*, the outward for the *Radius*. The inward head is exactly shaped, and covered with a Gristle, which rendreth it smooth, and fit for the Motions of the *Ulna*, which with a suitable Cavity plays about it, inserting upon every extension of the Arm its utmost Process (called the *Olecranon* or *Ancon*) in the large Cavity that is situate on the back-side of the *Humerus*. In every Flexure its lesser Protuberance plays into a lesser Cavity in the exterior part of the said *Humerus*. The *Radius* mean while, being round and flat, with a very small excavation doth play upon the outer head. These Heads have yet a farther use; viz. by their respective Processes to make a station for several Muscles: the outer Protuberance giving original to all the Extensions of the Hand and Fingers; the intermost to all the Flexors of the same. The Joint it self, besides the Ginglymoide connexion of the *Ulna* to the *Humerus*, is tied fast by the strong Ligament, and well bound in with Muscles, viz. on the inside it is lined with a strong and thick, but very soft end of the *Brachii internus*, whose Ligament, though hard and thick enough, yet hath a soft Pillow of Flesh interposed between it and the Joint, that so the pressure may not hinder the motion thereof, but rather give way to it. Yet is the pressure strong enough to keep the place firm, which the accession of the Tendon of the *Biceps* doth much more corroborate; so do the *Pronator radii teres* and *Supinator longus*, &c. The outer part is guarded by that great strong Muscle which usually is reckoned for two, viz. the *Biceps* and *Brachii externus*, which uniting together have a fleshy soft inside, but with a strong broad Ligament fixt on the outside to the *Olecranon*. There is also a little Muscle called *Anconeus*, which reaching from the end of the *Humerus* obliquely transverse doth insert it self into the *Ulna*, corroborating the Joint.

Descript.
of the El-
bow-joint.

The *Radius* also is bound close to the side of the *Ulna* and to the *Humerus* by two remarkable Ligaments; viz. the circular one that involveth the Joint; and the broad one that uniteth it and the *Ulna* together: it is also bound down by the neighbouring Muscles, especially the two *Supinators* and the *Pronator teres*.

He that considereth the figure of the *Ulna*, and the strength wherby it is tied to the *Humerus*, will think the Luxation of it almost impossible: yet even this also is sometimes made by the Force that may be put upon it, and that four several ways, if we may believe Authors; as outwardly, inwardly, and to each side.

Signs of
the Elbow
luxated.

If the Luxation be forward, the Arm hangeth streight out, or rather outward, and he cannot bend it; a Prominence appeareth in the Bout or inside of it, and an unwonted Cavity where the Elbow should be. But if the Luxation be backward, the Cavity will be in the fore part, and the Arm curved. If the Luxation be on the inside, the Cavity will be on the outside; and so the contrary, if it be externally distorted.

Prognost.

The perfect Luxations of this Joint do rarely happen. When they do they are difficultly restored; and if there be a Fracture of any of the Processes of the Joint, the case is deplorable.

Cure.

If the Cubit be luxated forward, the Arm must be extended, but not in a streight line, lest you break the Tip of the *Ulna*, but obliquely. To which end, two Persons being employed, one to hold the *Humerus*, the other to pull the Arm below, a third Person must guide the Elbow so as to keep it bent, and to direct the Bone. Which is done by pressing a Bolster upon the bend of the Joint, or by a Girt or other Bandage pulled behind, or by one in the nature of a Stirrup, in which the Chirurgeon may put his Foot, and make Extension that way.

If the Luxation be backwards, the Extension being made obliquely as before, the Reposition is easily guided by the Chirurgeon's Hand. Yet since the extending Muscles of the Cubit are very strong, it will be necessary that the Muscles serving the Cubit be first well embrocated with lenient Ointments: But if notwithstanding you cannot reduce it by Hand, the Ladder or other Engins must be used. And after Reduction apply Restrictives, &c. for these Luxations are subject to great Fluxion, Inflammation, &c.

1. Observ
of aluxa-
ted Elbow.

THE former of these Luxations happened to a Servant-maid in *White-friers* carrying a Pail of Water. Her Feet slipping, she endeavoured to save her self; but falling backward, she pitch'd up her Right-hand, and distorted the Head of the Bone inward a great way. The poor Creature was carried into the next House, being an Ale-house, and Mr. *Clark* a neighbouring Chirurgeon and my self were fetched. Dressings being made ready, and the Wench seated, one of the company stood on the contrary side of her, with both his Hands upon that Arm below the Shoulder, and held her firm. Mr. *Clark* made an Extension below the Cubit, and my self with a bolstered Girt upon the prominent Bone in the Bout of the Arm pulled it backward. After we had thus come to the very Brink of the Joint, Mr. *Clark* bowing the Arm suddenly forward, I drew it back into the place; then embrocated it *cum ol. ros. myrtill. & aceto*, and applied *empl. è bolo* with Bandage, and left her Hand upon her Breast. But she was lame long after.

If the Cubit slip out side-way, the Reduction may be made by Extension and impulse of the Hand.

That of the *Radius* is also reduced by the like means; so that Examples need not be given: only in the other of a curved Wrist, I shall give one Instance.

2. Observ.

A Lady being overthrown in her Coach, the lower Process of the *Ulna* called *Styloides* was distorted from the *Radius*, and one of the Bones of the *Carpus* shoved between. I made Extension of the Wrist, and press'd that Bone of the *Carpus* to its Fellows smooth, then thrust the Process of the *Ulna* close to the *Radius*, and applied round the luxated Joint an Emplaster of astringent Powders *cum album. ovi*, Splints and Bandage, as in a fractured Bone, and placed it on her Breast, and thereby restored it to good use and its natural Figure.

C H A P. VII.

Of Luxation of the Carpus, Metacarpus, and Fingers.

THE *Carpus* is composed of divers Bones. One lieth out of order. Three of them are joined to the Processes of the *Radius* and *Ulna*, four to the *Metacarpus*, and all of them bound in by a strong Ligament, by the strength of which the Joint is made more firm. Yet these Bones may be all thrust out together, or any one of them single, inwardly, outwardly, also towards either side.

This Luxation is discovered by the Tumour it maketh in the place where it lieth distorted; also by the Flexure or Extension of the Fingers. *Viz.* if the Bones be moved inward, the Flexors of those Fingers are so stretch'd, that the Extensors cannot stir them: and so contrary, if the Bones start outward, the Extensors are immoveable: and if they be luxated side-ways, the Hand leans either to the Thumb or Little-finger.

The way of Reduction is, to lay the Hand and that part of the Arm flat upon a Table, and make Extension above and below: during which the Surgeon presseth down the prominent Bones with his Hands into their several Cavities. The Bones reduced, remove the Hand, and place it upon a *Fernula*, and dress it up with Restrictives, Compress and Bandage.

The Fingers may be luxated backward, forward, or on either side. The single Luxation of the several Bones may be demonstrated by their Protuberance, and by the Complaint of the Patient. They may be easily reduced by Extension, they having no Process to hinder: and being reduced, the common Restrictive and Bandage will retain them so.

Signs of
the *Carpus*
luxated.

Reducti-
on.

Luxated
Fingers.

C H A P. VIII.

Of Luxation of the Hip.

THE Joint of the Hip is a Connexion of the Head of the *Os femoris* to the *Acetabulum* of the *Os ischion*, which is done by two strong Ligaments: one outward and membranous, encompassing the whole Head of the *Femur*, from the Edges of the *Acetabulum* to the farther end of the Neck, where it toucheth the great Trochanter: the other inward, of a round figure, like a Cord tying the utmost apex of the *Caput femoris* to the inner side of the *Acetabulum* near the Centre. This Articulation is confirmed and strengthened by great strong Muscles; *viz.* on the outside by the three *Glutes*, on the inside by the *Triceps* together with the *Levidus*, and the four little Rotators. All which being duly considered, it must needs follow, that the Force must be great that doth drive this out of its place. Yet when the Weight of the Body and the undue position of the Thigh do concur, they frequently make that Luxation: so likewise doth sometime external Force.

Descripti-
on of the
Hip.

It is remarkable, that this place admitteth not of a Semi-luxation as others do; the Head being so round, and the Cavity so glib, and deep, that whatever the Force be, if the Head be not thrust quite out, it will slip in again as soon as the Force ceaseth. It doth slip out four several ways, outwardly, inwardly, forward and backward. Yet these two latter I never saw; but by Congestion the Ligaments and Tendons may be so relaxed, that it may fall out either way.

O o o

If

Signs of a
luxated
Hip.

If the Luxation be inward, the Head of the *Femur* may be felt round and hard a little beneath the Groin. But if the Patient be in bed, you may judge of it by turning up the Cloaths at the Bed's Feet; the Leg will appear longer than the other, and the Knee and Foot lie turned outward. If the Luxation be outward, that Leg will be much shorter than the sound one, and the Toes turned inward.

Prognosis.
Sick.

In a Relaxation of the Hip, the Leg hangs for the most part directly down and loose, is weak, turneth either way, and is much emaciated.

Luxations of the Hip are difficultly reduced, and being so, are extreme apt to prolapse, by reason of the over-great Extension or Ruption of the internal Ligament, which should hold the Bone in its *Acetabulum*. And if it be not reduced, it will be subject to great Pain and Fluxion from the over stretching of the Muscles, and pressure upon them with its great head: yet after some months those Muscles become callous, and having yielded to the Extension, the Patient makes a shift to go upon it, though lamely. But the Member suffereth an *Atrophia*, and is shorter than the other.

When the Luxation happeneth by Congestion, it is subject to Apostemations, and the head of the Bone corrupts by lying slabb'd in the Humour, and the Patient languishes and dies emaciated.

Reduction
of the
Os femo-
ris.

If the Thigh-bone be luxated inward, and the Patient young and of a tender Constitution, it may be reduced by the Hand of the Chirurgeon: viz. he must lay one Hand upon the Thigh, and the other upon the Patient's Leg; and having somewhat extended it towards the sound Leg, he must suddenly force the Knee up towards the Belly, and press back the head of the *Femur* into its *Acetabulum*, and it will knap in. For there is no need of so great Extension in this kind of Luxation; for the most considerable Muscles being upon the stretch, the bowing of the Knee as aforesaid reduceth it. Yet in rough Bodies it may require stronger Extension: and in that case the Patient must be laid upon a Table flat on his Back; and a Pin of a good thickness out to be fixt in the middle of the Table, to stand up between his Legs close to that *Inguen*, that the Extension may be made thereby. During which the Extension must be made by two Men, the one pulling him by that Arm-pit, the other by the Leg: which latter Extension must be made obliquely towards the sound Leg.

If the Luxation be backward, he must be then laid upon his Belly, and the Pin placed as aforesaid in his Twist: it ought to be as thick as a Rowling-pin, and covered with Cotton, that its hardness may not be offensive. The Extension may also be made upward by a Towel or Girt between his Thighs: and the while that Leg must be stretcht by Pulleys, or such like strength, and the Bandage fastened above the Knee.

The Bone once reduced, dress it up with Restrictives and good Compress and Bandage, then bind it to the other Leg, and keep him in bed: for these Bones are apt to start, especially if the *Ligamentum teres* be broken. If after Reduction and such Regulation the Bone do start again, I should forbear any farther forcing it, to avoid the danger of Apostemation, &c. For, as I have said, they may recover strength to go on it, tho' it be never reduced.

A Luxation made by Relaxation or Resolution requireth good drying and corroborating Fomentations, Emplasters, Epispasticks, Fontanels, &c. The Habit of body ought also to be treated by Internals as in the *King's Evil*; and if it apostemate, to be dressed as such Abscesses.

C H A P. IX.

Of Luxation of the Knee.

THE Joint of the Knee is made by the connexion of the lower head of the *Femur* and the upper head of the *Tibia* and the *Patella*. The first of these by a double Protuberance is inserted into the double Cavity of the latter, and suffers constriction on the antierour part from the great and large Muscles, which running to and beyond the *Patella*, join that to the *Os tibia*, and bind it down upon the Articulation, so as of the whole to make a Joint. On the hinder side it is guarded with the two Hamstrings so called, viz. the Tendon of the *Biceps* outwardly, and of the *sartorius*, *gracilis*, *seminembranosus* & *seminervosus* inwardly: between which, through a little Cavity made for that purpose, all the great Vessels have their passage to the Legs. Now the Joint being thus strengthened doth scarce admit of any Luxation forward unless the cause be exceeding violent. Backward on each side it is subject to both Luxation and Semiluxation.

Descripti-
on of the
Knee-
joynr.

The Signs of the several Luxations of the Knee are apparent to the eye, by the Protuberance in the one part, and Cavity on the contrary.

Signs of a
luxated
Knee.
Reducti-
on.

They are not difficult to reduce, nor subject to such Accidents as those of the Elbow.

Those Luxations which happen on either side of the Knee may be reduced by a moderate Extension with your Hands. The Luxation backward is restored by extending it a little: then bend the Leg suddenly backward, bringing his Heel to his Buttock, and you shall hear it knap into its place. It being so, stretch it out again, and embrocate the Joints and Parts affected, and apply Astringents with a Compress in the Ham, with good Bandage. I shall shew you the manner of reducing the perfect Luxation more particularly as followeth.

A Gentleman of about 30 years of age, riding upon the Road some few miles out of Town, was by the rushing of a Cart tumbled with his Horse into a Ditch, and brought back to London extremely lame and bruised. I being fetch'd to him found him in bed. The head of the *Os tibia* was shot under the Thigh-bone, and lay stretch'd out straight, exceedingly swelled, and much blood extravasated amongst the Muscles of the Calf of his Leg. I caused the Patient to be laid on the contrary side: then one of the Company held him down, and kept that Thigh steady, whilst I took him by the Foot and Calf of his Leg: and after I had a little drawn it to me, I forced it backward towards his Buttock, by which very motion it knapt into its Place. That done, I extended it again, placing the while my Hand in the Hollow of his Knee. The motion of that Joint to and fro, and the filling up that Cavity under the *Rotula*, were certain signs of its Reduction. I embrocated the Leg cum albumine ov. ol. ros. myrtill. & aceto, and applied empl. & bolo over all, with a Compress in his Ham, then rowled it up, and laid his Leg upon a Pillow to the ease of the Patient. That done, I let him blood in his Arm, prescribed him an Emulsion of the cold Seeds, &c. and kept his Body soluble by Clysters, and advised him a slender Diet. The third day I repeated Embrocations with the foresaid Oils cum aceto, and thereby repelled the Humour so, that there only remained some remarks of the extravasated blood. I then embrocated those Parts cum ol. cham. lumbric. spir. vini,

Observa-
tion of a
luxated
Knee.

and applied *empl. stict. Paracels. & diapalma* on the weak Joint. From the first application he grew daily easier, and by these latter the Joint waxed strong, and he rose and walk'd with a Crutch in his Chamber: and some time afterwards I saw him walking abroad with a Stick in his hand.

C H A P. X.

Of Luxation of the Ankle-bones.

Descripti-
on of the
Ankle-
bones.

THE lower end of the *Tibia* being joyned to the *Fibula* maketh a ginglymoïde Cavity in which the *Os tali* is inserted: the two Ancles being on the inside the Product of *Os tibiae*, make the outer on the *Fibula*. Underneath lie all the *Ossa tarfi* in order; viz. the *Os calcis* under the *Talus*, the *Os cymbiforme* before it. Outward of that, joyning to the *Os calcis*, is the *Os enbiforme*; and between the *Os cymbiforme* and the *Metatarsus* lie the three *Ossa cuneiformia*.

The Joint is involved in strong Membranes and Ligaments, and bound in by divers strong Tendons: viz. behind by the Tendon of the *Gastrocnemius*, and yet close underneath in the Hollow of the *Calcaneum* by the *Flexores pollicis & tertii internodii digitorum lateralis*; inward by the *tibialis posticus*; outward by the *preconeï*; forward by the *tibialis anticus*. These joyned to the strong Ligaments that every where bind up the Part, and assisted by the figure of the Bones, do make a Joint that would not easily be dislocated, did not so great a weight lie thereupon. But from great weight and force it suffereth four ways.

Signs of
a luxated
Ankle.

If the luxated Bone be distorted inward, the Sole of the foot lieth turned outward; so likewise if the Luxation be in the exterior part. If the Luxation be forward, the broad tendon of the Heel lieth hard and stretch'd out, and the Foot appeareth shorter, because the Joint is moved forward, and possesseth most part of the Foot. But if the luxated Bone be distorted backward, it lieth over the Heel-bone, in which case the Sole of the foot seemeth bigger and longer. Accordingly as these Signs are evident, the Luxation is perfect or imperfect.

Prognostick.

The Reduction is not difficult; yet these Luxations are subject to great Pain, and are accompanied with Tumour and *Ecchymosis*, and the Patients are long lame of them.

Reduction.

The way of Reduction in tender Constitutions may be by Extension with your hands, the one taking hold of the Leg, the other of the Foot. During which Extension, the Chirurgion must press the Bone the contrary way to which it was fallen. In case the Extension by your Hands suffice not, you may make use of Pulleys or other Engine. The Bone being reduced, apply Restrictives with Bandage as above said.

Sometimes the Ankle-bone is apt to turn out on either side, by reason of Relaxation of the Tendons: in which case, though you do reduce it, yet upon the least walking on it the Bone slips out again. Some years ago such a one was brought to me; I reduced it easily, and it as soon slipped out again: whereupon I caused a Shooe to be made by which the Ankle was kept steady, and at length by application of Astringents, &c. it recovered strength.

The

The Bones of the *Metatarsus* and Toes are frequently fractured, but rarely luxated, by reason of their strong Ligation by so many Tendons. But if it so happen, their Cure is the same with that of the Fingers and Hand.

C H A P. XI.

Of Luxation of the Spine.

Luxation of the Spine, which are most usually from inward Causes, as in Rickety Children, also in the *King's Evil* and other Tumours happening upon those Bones, require internal Remedies, so are referable to a Physician. The Chirurgical part consisteth in the application of Plaisters, as hath been shewed in the Treatise of the *King's Evil*, also in good Bandage, which chiefly belongs to the Bodies-maker.

When it happeneth from force, a speedy Reposition is, required about which *Galen*, *Hippocrates*, *Oribasius*, *Celsus*, &c. speak much, who all may be consulted. The case is so rare, that I think it not needful to add any Discourse here; much less that of *Hildanus*, about reducing the Spine when luxated inwardly. He that pleaseth may look into the Author.

O F

Lues Venerea.

The Eighth Book.

C H A P. I

Of Lues Venerea.

Definitio-
on.Ways of
infection.

Lues Venerea is a venomous contagious Disease gotten either Immediately or Mediatly from an impure Coition.

I say *Immediately* or *Mediatly*, because it is very manifest, that not only the Persons so copulating are infected, but also the Children derived from such Parents, and Nurses that suckle those Children, and any other Child that sucks upon those Nurses; and so forwards. It is frequent to mention other secundary ways of the propagation of it; as lying in the same Bed with an infected person, lying in the same Sheets after them, or wearing their Cloaths. Nay it is affirmed by some, that men have been infected by the same Cloaths they themselves wore when they were diseased. Drinking with one so diseased, or sitting on the the Close-stool after them, are likewise numbred amongst the causes of infection.

These are all such convenient excuses for the more shie and coy Patients who will not otherwise be brought to confess their distempers, that it is pity to discountenance them. Nor will I deny the differences of Constitutions to be so great, and some of them so liable to this Disease by some other previous indisposition of body, that they may be infected with the tenth part of what another would escape sound from. And this especially I do acknowledge in Women, the softness and tenderness of whose Sex being frequently attended with thin and sharp serum in the blood, renders them liable to very quick impressions: yet in Men, and indeed in the generality of Patients, we find the Disease not so active as to convey it self from the subject to another without actual coition, or something very equivalent to it. And as to wearing of the same Cloaths, it is notorious that many hundreds cured by us Chirurgeons here in the Town, do commit that error (if it be one) without the least inconvenience. Nay in sound and firm constitutions impure coition it self is not always sufficient to infect. Of which I have seen the frequent Experiment during the three years I served in the King of Spain's Navy, where our Mariners as soon as their pockets were full of money would be getting ashore to the *Negroes*, and other common Woman, that usually attended their Landing, and served their pleasures in the neighbouring Broom which grew very plentifully on some of those shores. I have known, and dare say, more than twenty men lay with one and the same Woman the same day, and only some of them infected, the rest going free, though they all equally deserved it.

But Nurses may either infect Children or be infected by them. Children that have had no Ulcers in their Mouths or Lips, nor any other visible symptom of the

the

the *Lues*, have notwithstanding betrayed their own infection by transmitting it to the Nipple of the Nurse. In which case it is frequent to see serpiginous Ulcers arise one after another, growing at length into so many round crusty Ulcers: also Nodes thrusting out of the back of the Hands, Shins, &c.

Infections of Children are more obscure, for though many of them after they be born have such Scabs and Ulcers as do sufficiently manifest the Disease; yet it is not always so: for generally they do often come into the world very clear, and with the appearance of very sound bodies, which notwithstanding have been certainly infected and have dyed of it, or at least have been very infirm; and though they were brought to their ends by some other apparent Disease, yet the Pox hath been judged the foundation of all.

I shall give you a three-handed instance that may confirm several parts of this Discourse.

A lusty young Fellow brought me to see his Wife, which I did in the company of Dr. *Mapletoft*; we found upon her face a great cluster of round crusty Venereal Ulcers, yet not only her Husband was seemingly sound, but her Child also, who being half a year old appeared lusty and strong, played merrily in the Nurses Arms, but that day died suddenly: nor could I impute that accident to any other cause, but the forementioned infection.

Yet I would not have any man rash in judging all Ulcers to be Venereal that do resemble them, for I have seen Nurses with chapt Nipples, and serpiginous Ulcers on the Breasts, and Maids likewise in the same condition, who have been cured without any respect to the *Lues*.

I have seen also many Infants broken out about the Lips, Face, Head and Body, with many suspicious *pustulae* and Ulcers, that were born of chaste Parents. In our publick healings we present many such; if there be any diseased glandules found about the *musculus mastoideus*, I supposing them rather to be strumous.

Having thus far treated of the *original* of the *Lues*, it will be now season- Its Nature.
able to describe the *Disease it self*. For the doing of which it will not be necessary to run through all the nice diversity of opinions which *Sennertus* and other Authors have reckon'd up; such an attempt would better become a Chair in the University than a Practical Treatise: I do only in short say, that it is a Disease produced not by excess of any of our four qualities, but by the actual communication of a downright venom, which usually affects that part of the body which it first toucheth, and afterward the blood it self, by the vertue of which all the solid parts are by degrees tainted.

The *Species* or rather *Degrees* of this Disease have by *Palmarius* been reckon- Its De-
ed four according to the degrees of Infection. In the first he supposeth only grees and
the Hair to fall off without any other hurt of the body; a case, I doubt, very Symp-
rare. In the second the Skin groweth rough and spotted with many little toms.
protuberances. In the third downright Scabs appear in the Head, Face, &c. In the fourth the solid parts are infected, as the Bones, &c. But these degrees are either ill ordered, or at least not justified to the appearance of the Diseases that occur in this age. Therefore I shall endeavour to rank the Degrees or Symptoms of it according to the events which we usually observe in our practice.

Therefore when a Man hath had to do with an Impure Woman, either he hath some heat or Inflammation on the *Penis* with excoriation, which ariseth soon after coition, and is caused by the affrication of a vitulent humour, or else he finds a heat in his Urine, and in a day, two or three, a *Gonorrhœa* or issuing of virulent matter out of the seminal Vessels through the *Urethra*. This inflammation is very apt to produce excoriation and ulceration, upon which cancerous Ulcers arise; and sometime when the Infection hath been
vehement

vehement, or the Inflammation neglected, it tends to a Gangrene, and Crystalline Bladders arise, and the part mortifieth.

Sometimes a *Gonorrhœa* succeeds not; only the infection taking rather along the Cutis to the Groin, doth make impression on the neighbouring Glandules, and produce a Bubo, which according to the degree of its malignancy either proves easily curable, or else in proves in its venom, and terminates in a Phagedænous Ulcer with jagged lips. At this time of the Disease I have seen many round, hard, venereal Ulcers upon the *Scrotum* and *Perinæum*. Sometimes where none of the other symptoms have preceeded, a small cancerous Ulcer ariseth between the Prepuce and the *glans*, above or below, on one side, or in the entrance of the *Urethra*; one while eating through it, other while destroying the *frænum*, &c. These Ulcers are sometimes only corrosive, and sometimes callous, or a callosity without an Ulcer.

The attendance of a Cancer is commonly a breaking out all over the body like a flea-biting, which terminates in various sorts of Terters or Ulcerous Scabs; or it may be that Pustules arise in one or more places of the Body, as Head, Face, Arms, Thighs or Legs, or Ulcers in the Tonsils, Palate, &c. and at the same time I have seen a Gumminess upon the *musculus mastoideus*, drawing the Neck on one side.

The wandring pains begin towards night to affect either the Shoulders, Arms, Legs, or Head; sometimes this last is affected alone to great excess. And about this time *Verruca*, *Condylomata*, *Marisca* or *Ficus* appear in the *Podex*; also *Oxæna* and Ulcers of the spongiest part of the *Osethmoides* and gristles of the Nose; also about this time Tumours by congestion arise in the Breast, Arms, Legs, and become Ulcers of difficult cure.

The pains growing more fixed, *Gummata* or Nodes usually arise at continually afflict them, but toward night grow more intolerable, and and length the Bones corrupt.

Coincident with several of these latter degrees are the noise in the Ears, Deafness, a *Polypus*, *Ophthalmia*, *Fistula Lachrymalis*, fierce Catarrhs, Colicks, *Diarrhœa*, and *Tabes*.

These dreadful Symptoms have frequently posselt the imaginations of some people, who having taken the way to get the Pox are soon perswaded that they have it. These men will strangely imagine all the Pains and other Symptoms they have read of, or have heard other men talk of. Many of these hypochondriack have come to Sir *Fræn. Pr.* in which cases he hath been pleased to send for me to consider of their complaints with him. They commonly went away from us unsatisfied, nor could they quiet their minds till they found some undertaker that would comply with them; which done, they were never the better, the imagination in which the Disease was seated remaining still uncured; whereupon presuming they were not in hands skilful enough, they have gone to others, and so forwards, till they had ruined both their Bodies and Purfes.

There have been three of these people with me lately; one a Tradesman, who told me that since his Wifes death he had fallen into ill company, and being heated with drink, strayed and got a Clap, for which he had been under several hands; that it had cost him 40. pounds amongst them, but he was still worse and worse. I asked him if he had ever a *Gonorrhœa*? Yea, said he, with great pain in my Back, which still continues: also such a pain in my Nose, that I fear it will fall. Upon more particular enquiry I found no such thing; only upon straining to make Urine or upon the Close-stool, he had an involuntary effusion of Seed, which was an old infirmity he had quite forgot. I endeavoured to satisfie him that he escaped better than he deserved. Whether he continued in the same opinion he seemed to have received from me of his condition

dition I somewhat doubted, but lately have seen him and been assured, that since he spake with me he had taken no Physick, nor felt any cause for it, he continuing very well.

Authors upon the first entrance of the Pox into *Christendom* generally looked upon it as not only incurable, but also so highly infectious that they ran away from it as much as the *Jews* did from the Leprosie; but later Ages and long experience have made it less formidable: yet even to this day it must needs be acknowledged difficult to cure, in consideration of its malign and contagious quality, and the ungovernable disposition of the Patients.

If the habit of body be strong, the cure of all these Species of *Lues Venerea*, whether they be Cancer, *Pustula*, *Serpigo*, *Herpes miliaris*, *exedens*, *Phagedaena*, *Ozema*, Ulcers in the Palate or Tonsils, they are all much easier cured than the same are in any other chronick Disease: but to eradicate the *virus* that it doth not return with more malignity, is somewhat more difficult.

If the Patient hath been formerly clapt, it will be the more difficult to cure him the second time, and worse the third.

If he hath passed through long courses of Mercurial remedies ineffectually, his cure will be difficult; and if he hath been Salivated by Uction and relapsed, the Cure will be hard, by reason the Mercury is become familiar to him, and his body is for the most part emaciated and squalid.

Gummata and Nodes are more difficult of cure than the Species above-mentioned, and those whose Bones are corrupted are yet more difficult of cure: but if the habit of body be strong and the *Viscera* sound, all the species of this Disease are cureable if the Patient keep his Chamber, and submit to the rules of Physick and Dyet, without which submission we can scarce cure the lesser Species; and accordingly as they have been slubber'd over, the malignity that remains will at one time or other show it self either in some Chronick Disease, as *Asthma*, Catarrh, Colick, *Diarrhæa*, *Stranguria*, *Rheumatismus*, *Hydrops*, &c. or in some species of the *Lues Venerea*, when possibly the Patient will not be so willing to acknowledge the Disease, and what hopes is there then of his Cure?

Also if the *Viscera* be unsound, or the Patient *Hectick*, a *Marasmus* will attend it, and the Cure is impossible.

C H A P. II.

Of the Remedies generally used in the Cure.

THE Medicines alter according to the degrees of the Malady, and other circumstances, in which the following Discourse will inform you. My present business is to give a general view of them all, with their Natures and Uses. Now the known Remedies, all or some of which we use in this Cure, are *to Cure*, Bleeding, Purging, Vomiting, Salivating, Sweating, Cordials and Opiates; to which we may add *Dietetical* directions, especially *Alterative Drinks*, and *Topicks*.

Concerning *Phlebotomy*, tho' it do not cure the Disease, yet in the very beginning of it we usually let blood, to calm the fermenting Humours, and dispose them for Evacuation, and prescribe a Clyster before or after.

If the Disease be of long continuance, and they have been let Blood some months before, yet if we design Salivation, we do again let them Blood, *By bleeding.* the Body be not too much emaciated. For in some of those a Fever hath happened in the time of raising the Salivation: and in bodies of stronger habits I have often seen them to break out in heat all over in the beginning of

the Flux, so that then I have been necessitated to let them Blood when it was not so proper. When this Disease appeareth in the Groin with a *Bubo*, we do not let Blood; yet some have advised it in the Foot as a way to lead the Humours thither.

Purging.

Purging is more universally necessary, few Cases being to be put in this Disease where it is not required. For whosoever is infected, either is already *Cachymical*, or will quickly be so, if by a sudden evacuation of the corrupted matter you do not prevent it. It is also useful in keeping the Blood low, which the higher it is, the more apt it is to be inflamed. Of Purges some are only *Lenitive*, fit for weak and extenuated Persons, also to dispose the Body for more strong Purges. The *Lenitives* are *Manna* with *Cremor Tartari* in Whey or Posset-drink, also the decoctions of *Tamarinds*, *Cassia*, with the infusions of *Sena*, *Rhubarb*, &c. *Syr. de pomis purg. de cichoreo cum Rhabarb. Elect. lenitivum, Diaprun. Diacatholicon*, &c. *R. Sarsaparillæ ziiij. scobis Guaiaci 3j. fol. beton. M. ʒ. flor. Paralyseos P. i. Trægæ com. 3ij. fol. senæ ʒʒ. coquant. lent. igne; colat. adde Rhei, agarici trochiscati seorsim in aq. cichorei infus. an. 3ʒʒ. Colatura adde Syr. infus. Ros. pallidar. 3vj. Manna 3j. f. potio. R. fol. senæ mund. ʒʒ. Turbith gummosi, Jalap. hermodactyl. an. 3j. Zinziberis, Cinnamomi an. ʒj. coq. in sufficienti quant. decoct. sarsæ, &c. ad 3vj. Colat. adde Syr. de spin. cervina ʒʒʒ. f. Potio. R. Elect. Diacatholici ʒʒ. diaprun. solut. 3ij. diasennæ. 3j. cum syr. de sp. cervina q. s. exhibeatur in cochleari. These, besides their use where stronger cannot be given, are also preparatives for bleeding, and thence to stronger Physick. viz. such as followeth. *R. Fol. Sennæ ʒiv. Turbith gummosi, Hermodactyl. an. ʒij. Hellebori nigri, pulp. Colocynth. an. 3vj. ras. Guaiaci, sassafr. an. ʒj. cort. Guaiaci, baccar. Juniperi recent. cort. exterio. citrian. ʒʒ. Cinnamomi, Caryophyllat. an. 3ij. infund. in equal. part. aquar. melissæ, ulmarie, card. benedict. per. horas 48. deinde f. ebullitio levis cum express. fort. In colatura dissolve Aloes rosat. ʒij. ʒ. Diagrid. ʒj. coagulentur: ad formam extract. prou. Dos. ʒʒ. ad ʒj. R. Turbith gummosi, sennæ, Hermodact. an. ʒiiij. Diagrid. ʒij. Zinziberis ʒj. Mastiches ʒʒ. Sacchari opt. ʒiiij. Pulveriz. omnia subtil. & per setaceum trajiciatur. Dosis ʒj. in vino alb. vel juscule. Or, R. Folior. Sennæ, Rhei an. ʒ. Agarici trochiscati, turbith, Hermodact. Crystalli Tartari an. ʒij. Jalapii, Meoacæ an. ʒij. f. pulvis subtil. & cum syr. de sp. cervina, & de pomis purg. q. s. f. Electuar. dos. ʒij. The Stronger are *Pil. è duobus, Cochæ min. Extract. Rudii, pul. Cornichini*, &c. These ought to be joined with *Calomel*. viz. *R. Mer. Dul. gr. 15. ant 20. Extract. Rudii, vel Chochæ min. ʒj. vel. ʒʒ. fol. auri q. s. cum Syr. Ros. solut. f. pill. R. Extract. nost. ʒij. gum. Guaiaci ʒʒ. Merc. dul. gr. xiv. ascen dendo ad ʒj. cum syr. de spina cervina formentur pill. In gross Phlegmatick Bodies you may purge with pul. Cornichini & Mer. dul. In case of pain we add a grain or more of *Laudanum*. Mercury thus mixt with purgatives is it from which we must expect our main success. For though the other may purge strongly, they of themselves have not vertue to check the malignity of even the lesser species of this Disease.***

This I the rather add, because of the wickedness of many Pretenders, who will in this Cure declaim against the use of Mercury, in which if they speak honestly, and follow their Judgments (and do not give it at the same time when they speak against it, as many do) they will prolong their Cure to no purpose, and meet with disgrace at last; it being very sure, that no species of it will be cured without it. I know *Fernelius*, and some of his Disciples writ vehemently against it, but the whole current of the Able Practitioners have written on the other side. And by what I find by my experience, I dare say, that *Fernelius* never cured a confirmed Pox without it, unless the Patient had been in some other hands before who had fluxed him; in which Case some sudorifick course prescribed by him might get the Credit of a Cure, whose foundation was laid

laid in Mercury. I write this the more confidently, because of the many attempts I have my self made, and seen endeavoured by some worthy late Practicers in our Faculties without Mercury, but by omitting of it, our Cures were rendered tedious and unsuccessful, the Ulcers the while spreading and breaking out fresh in some parts while we were endeavouring to Cure them in others, the Disease becoming more fierce in some of them whilst their Bodies were purged with Catharticks without Mercury. Nay, where one of these Inveighers against Mercury gave it in a Course of seven weeks, he could not by all his endeavours of Mercurial Emplasters, Unguents or Waters outwardly applyed, nor with his Sweating, Diet-drinks, &c. cure one small *Herpes* in the Face, yet was better paid for his Physick than I was for the Cure.

Vomiting is of use in great disorders of the Stomack, when the foulness of that requires it, or when the Ulcers of some particular part require a sudden revulsion. So likewise when after the use of much Mercury outward or inward to salivate, it doth not arise kindly, we by this means cause a motion upward, and derive the humour that way.

They are generally strong if the party can bear them, viz. some Preparations of Mercury, as *Turbith mineral*, &c. or, Antimonial, as *Crocus Metallor.* in stronger Bodies; but in weaker Constitutions we give such as we may.

The next thing which offers it self to our consideration, is *Salivation*, without which few great Cures are done in this Disease. Nay, when a great Evacuation by salivation is not intended, we are forced to dispose the humours that way by Mercury, that being so disposed they may be rendered more obedient to purging and sweating Remedies. For the truth of this, I need not produce any Authority, common experience will make it evident to you; but of this hereafter.

The methods of Salivating are divers, but all by Mercury; besides which faculty of raising a Salivation, it heals, attenuates, resolves, provokes Urine, and moves noxious Humours upwards and downwards, by which not only the more subtile but the more gross and feculent excrementitious humours are expelled, and that according to its several Preparations, either inwardly given, or outwardly applyed.

Inwardly are prescribed various Preparations of Mercury, viz. *Merc. sublimatus, dulcis, Merc. precipitat. albus, rubr. citr. niger, viridis, &c.* There are also different Preparations of some of these, as the *Turbith Minerale*, the Amalgamations of Mercury with Gold, *Theriaca Metallor.* &c. They Purge, Vomit, and Salivate, or are Sudorifick, and are stronger or weaker in their Operations, according as they are freed of their corrosive quality. The strongest of them are capable of being rendered sweet, and of being dispirited of their Vomitive and salivating qualities.

When we design Salivation by *Mercurius Dulcis*, we give it from 20 to 25 grains, and sometimes to thirty, either in a spoonful of white bread and milk, or in *conf. ros. rub. conf. boraginis, confect. Alchermes*, or some such like Cordial Electuary. When we suspect it may work by stool, we prescribe it in *Elect. Disacordii*, or *Theriaca* at night going to bed, and then it also serves to alleviate their pains, and dispose them to rest. If after the taking it 4 or 5 days their chaps do not swell, it may be reasonable to move it upwards by a few grains of *Turbith Minerale*. Accordingly as their chaps swell they will salivate. If their mouths be much ulcerated and swelled, the Salivation may last 18 or 20 days, during which they are to keep warm, especially about their head, neck and Chaps, and to drink Chicken broth, or Posset-Ale.

In the *Declination* of the Flux, we prescribe them a *Decoct. Sassa*, and before it ceaseth, we purge them with some Cathartick Apozeme, and proceed in the rest, as shall be shewed in its proper place.

But the Salivating with *Merc. dulcis* alone will scarce cure the middle *Species* of this Disease. For though the Ulcers do cicatrize, and wandering pains remit thereby, yet they will return, or new pustules will arise, as that Salivation declineth, or presently after. And indeed I have found better effects by the frequent purging with it mixed with some good Cathartick, than by the only Salivating with it alone.

Merc. Præcipitatus albus may be given proportionably, as hath been said of *Merc. dulcis*.

Arcanum Corallinum, as it is generally sold in the Shops, may be given from 3 Grains to 5. One dose of it prescribed by me to a Woman Diseased with *Serpigo*, &c. vomited her often, and Salivated her 20 days, contrary to my intention, but cleared her skin of its foulness.

Red Præcipitate is also Vomitive, but being well wash'd may be taken as safely as the *White Præcipitate*. But since I practised here in the City, I have not used it. *Præcipitatus viridis* is also Vomitive, and the most churlish preparation of Mercury; the dose is much about the same as that of *Arcan. Corallin.* *Hartman.* prescribed it to 8 Grains.

Turbith Minerale, as it is sold in the Shop, is a rough Medicine, but being somewhat dulcorated, first procureth Vomiting, then Salivation, and is proper to make a sudden revulsion in such cases where there is a necessity of giving a speedy relief to an afflicted part, and contributeth to the cure of this Disease in such cases where *Merc. dulcis* hath not force. That which I commend to your Use is made out of *Vigo's Præcipitate*, and may be given from 12 to 18 Grains, but I rarely prescribe it to any that have not first taken *Merc. dulcis*. It takes off nocturnal pains, and resolves *Gummata* and *Nodes* which have not been of long continuance, and hastneth the Cure of the most malignant Ulcers that accompany this Disease.

Mercury Amalgamed with Gold doth Vomit and raise Salivation, but is generally corrected and made a Sudorifick: So the *Turbith Minerale* is made Diaphoretick.

Bezoardicum Minerale, and *Æthiops Mineralis* are also Diaphoretical, and of their Use you may see more hereafter.

Mercurius sublimatus corrosivus dissolved in *Aqua fontis* given inwardly doth also raise Salivation and vomiting, if the Dose be proportioned. It is much commended by some Practitioners, but I never made tryal of it.

This following I have frequently prescribed, and so may you if you please: *R. Merc. sublimat. ʒij. Cinnamomi, galangæ, curcumæ an. ʒij. croci ʒj. aq. fumarie ʒij. infundantur in Balneo per horas 24. deinde colentur pro usu.* The Dose is 3 or 4 Spoonfuls in a morning, and is to be repeated many days, they drinking Posset-drink, as in other Vomitives.

There is also a way of Salivating by dissolving of *Merc. sublimat.* in a Bath; the use and manner of making it you may see in the Chapter of *Elephantiasis*.

Crude Mercury is also frequently prescribed internally to raise Salivation, and is given from one Scruple to two or higher, *cum terebinth. Veneta.* The Pill *Barbarosa*, which is a mixture of crude Mercury with *Troch. Alband. pul. Jalap. diagred. &c.* and is commonly called the *Blew Pill*, purgeth powerfully, and frequently raiseth a Salivation. I made some tryal of it, but it never answered my expectation; yet may Cure the lesser *Species* at the long run, if the Patient keep his Chamber, and observe a strict method in Diet, Sweating, &c.

These following Pills were prescribed by Sir *Theodore Mayern* to raise a Salivation. *R. Terebinth. venetæ cocturæ induratæ, Rhei electi, pulver. ʒβ. Pul. Sarsaparillæ, ʒj. Myrrhæ, gum. Guaiaci, Mastich. succin. albi an. ʒij. fol. atrin. nō 36. Mercurii Philosoph. vel aliàs ex cinnabar. resuscitati ad pondus omnium, bals. Peruviana q. s. Dos. ʒj. ad ʒij.*

There

There is also a way of raising Salivation by suffumigation, the prescription whereof is as followeth: *R Cinnabar. ʒij. Merc. crud. ʒj. Mastich. Thuris, Sandarachæ, an. ʒʒ. Stryacis, Calam. Benzoin. an. ʒij. f. omnium. pul. subtil. qui excipiatur Terebinth. q. s. formentur Trochisci ad pondus ʒlii. pro usu.*

When the *Lues Venerea* is grown inveterate, and affecteth the most solid parts with *Gummata*, &c. and the habit of Body debilitated and vitiated by the frequent exhibition of Mercury, if then requireth a more powerful Remedy, viz. Salivation by Uction. There are various sorts of them published by Authors, who have treated of the cure that way; the principal Ingredient in it is Quick-silver, it is that which doth the Work, the additional materials may be at your own choice, every one compounding them as they think fit. You have an Example of one in the *Pharmacopœia Londinensis*, under the name of *Unguent. Neapolitanum*, that hath 4 Ounces of crude Mercury to 2 pounds of Oyntment. By others, *R Axungia porcina ʒvi. Butyri rec. ʒij. Stryacis liquidæ ʒij. Hydrargyri triti & extincti ʒj. cera q. s.* This following is weaker. *R Axung. porcine. ʒij. Terebinth. ʒj. pul. Ireos, Thuris, Mastiches an. ʒij. Olei Cham. Lilior. an ʒij. Laurini ʒj. Stryacis calamitæ ʒʒ. argent. vivi ʒij. M. f. a.* Authors have generally proportioned the quantity of Mercury according to the strength of the Patient, and some of them have undertaken to direct you how much of the Uction you shall use at a time, but that would be extremely troublesome to observe, and may prove dangerous to the Patient at last.

The Uction which I have used for the most part this last 20 years hath been made by a prescription of *Sir Alex. Frazer*, whose Practice with it I had frequently seen with good Success. In it there is 6 Ounces of crude Mercury to 16 Ounces of the Materials. If you shall make up an Uction at that rate, you will find your curiosity in the choice of the Oyntments to mix with the Mercury not to be so very necessary, for I have sometimes raised a Salivation very well by mixing 6 Ounces of crude Mercury extinguished in *Terebinth*, with 16 Ounces of *Axung. porcine*, and for Common People a prepared *Axung.* with an addition of *Ol. Terebinth*, have served: For the better sort of People. *R Axung. porcine ʒvi. Unguent. Nervin. ʒiv. Unguent. Laurini, & Dialthæe an. ʒij. Ol. Pulpini ʒj. Stryacis liquidæ ʒij. pul. rad. Ireos Florent. Gum. Guaiaci an. ʒʒ. Ol. Caryophyl. q. s. Argent. vivi extincti. cum Terebinth ʒvj. Mf.* The preparation to this way of Salivating is by bleeding and purging, if their Bodies will bear it; otherwise bath them, and keep their Bodies soluble the while by Clysters, Lenitive Bolus's of *Cassia, Manna, cum syr. violar.*

In order to your farther prosecution of this course your Patient ought to lodge near your house in a close warm Chamber; if the Season be cold the windows must be covered with Blankets, and the bed near the fire, and incompassed with a Screen if the Chamber be large. You ought also to have a strong healthy Nurse, such as hath been accustomed to the employment, that she may in the absence of the Chirurgeon know how to wash the Patients mouth, and direct and incourage him in such Rules as may be necessary in the time of Salivating.

The most proper place for Uction is a Stove, if it may be had, and the Patient can bear it; if he be weak his Bed must be used, otherwise for want of a Stove he must sit incompassed with a Screen (as I said) by the fire side but not too near it. If in the anointing he use his own hands, he may save his Chirurgeon much trouble, and do the work better than it can be done for him: But if other help be required, then we arm our hands with Bladders or Gloves, and fall to it. The old, and still most common method adviseth to begin at the Feet, and thence to arise to the Legs, Thighs, Hips, and so upwards on the Spine to the Neck, taking his Hands, Arms, Shoulders. The Belly ought to be avoided. And indeed much of the other trouble in weak Bodies may be spared, for in such the anointing of the Legs and Arms, (or Thighs, if modesty prevent you

you not) will obtain the same, and is sufficient if the Mercury mix once with the blood to such a degree as to cause a Salivation. Whatsoever the manner of the Unction be, the parts first anointed ought to be covered before you proceed to the next, as the Legs with stockings, Thighs, with trouzes, &c. till at last his neck be well wrapped with a napkin tacked up to his Cap round about to his ears, and fastned before to keep his chaps warm. After this a warm Bed will be convenient, and a draught of Posset-drink in order to a breathing sweat. Having so reposed himself an hour, or two, he may rise and provide for his Dinner, which must consist of meat of easie digestion, roasted or boiled. To his Dinner he may drink Beer or Ale with a toast, the rest of the day he must be confined to Posset-drink. Unction may be repeated twice a day if you see cause. But if the chaps swell apace you must moderate your hand, and it may be quite hold it off, lest you bring on the Salivation too fast, and endanger the Patient: when he comes to this state you must keep him to the use of Posset-drink and Broth, which ought to be ready in quantity. Also burnt Wine, *aq. Theriacalis*, &c. must be ready to prevent fainting. His mouth must be syringed with a decoct. *bordei cum liquiritia, rad. althaeae*, &c. New milk held in his mouth, or Chicken-broth will ease the pain, and digest the sloughs that arise. A rolled clout ought to be placed between his teeth to keep his chaps from closing. He must be raised high in his Bed, if his weakness constrain him to it, and kept forward that is Rheum may run out and not down his throat; but if he can rise, he will spit better and more plentifully. Salivations by Unctions commonly last 24, or 25 days, sometimes to the 30 day.

In the height of it our work is to keep up their strength; and if thro' Costiveness they spit less, give them a Clyster that they may spit better, and attend the washing their mouths; but as the sloughs begin to separate, which will be towards the declension of the Salivation, prescribe them a decoction of *Sarsa*, &c. to drink at least thrice a day; and before the slough's quite cast off, purge them with some cathartick Apozeme made in some of the aforesaid decoct. *sarsae*; as they are able to eat meat; put them into a drying diet and sweat them, &c. as shall be shewed in its proper place.

It happeneth sometimes in anointing, that their mouths are much ulcerated, and their Breaths smell strong, yet their Cheeks do not swell, nor they spit considerably; in which case forbear the anointing, and consider the cause of it, and if the Body be strong and Plethorick, vomit them with *Turbith*, or *infus. croc. metallor.* but if they be weak or costive, administer a Clyster, and if afterwards it arise not, dispose them to sweat with draughts of warm Posset-Ale, or bath them, for that way it will be sometimes raised when by the other it will not. But if they have faintness or palpitation of the Heart, shortness of Breath, Fever, &c. your best way will be to purge it off by some *infus. of Sena*, &c. or decoct. *Sena Gereonis*, with the addition of *syr. Ros. solut. syr. de Spina cervina*, &c. and keep up their Spirits the while with Cordials and good Broths. If their Lungs be oppressed, let them blood, and prescribe *Lobochs*; but if there be also a suppression of Urine, or that they make but little Urine and high coloured, purge them with *Barnet* or *Epsom* water turned into Posset, and quicken it with some purging Syrup. If by these ways of purging the accidents remit, and the Salivation riseth, it is well; but if it do not, yet there being a colliquation made, you may by well purging, strict diet, sweating, &c. obtain your end. While you are removing the abovesaid accidents, you must have a special regard to the Ulcers within their mouths, for it is from the fixing of the Mercury that those malign Ulcers are made, which the less sensibly they are of them, the more corrupt they are.

Sometimes in raising the Salivation by Unction it passeth downwards by Stool, in which case we prescribe *Theriaca*, *Diascord.* *Laudanum opiat.* &c. which

which being given at night will not only strengthen their Bowels, but dispose them to rest, and encourage them to go on in the anointing. A vomit of *Turbith Minerale* after the Unction hath been somewhat used, doth frequently raise the Salivation; and after it is once well raised, you may heighten or continue it by the application of some of the Emplaisters following. But if after all your endeavours to raise the Salivation it doth discharge itself in a *Diarrhæa* with great Evacuation, you are then to defend the Intestines from the Acrimony of the humours by Clysters of Chicken-broth, Milk with *ol. Olivæ. vitel. Ovor.* lest a dysentery do follow. Suppositories of Deer Suet, or *ol. Hyperici, &c.* cast up with a Syringe, are proper to appease the *tentismus*. Inwardly we prescribe large draughts of Chicken-broth, *decoct. cornu. cervi ussi*, Milk and Water boyled with a stick of Cinnamon.

After the Flux is stopt, you must consider the strength of the Patient, and the quantity of the Unction which was applied, and the greatness of the Evacuation. If it was to the extreme weakning of the Patient, do not insist long upon the thoughts of salivating again, but proceed with Sudorificks, &c. as above said; not doubting of success in the cure. For such *Diarrhæa's* do for the most part contribute as much to the cure as if they had salivated.

There is yet another way of Salivating, and that is by the application of Mercurial Emplaisters about the Arms, Legs, &c. They were first designed I suppose for the more tender and delicate sort of people who would not admit of the Unction. There are various prescriptions of them, whereof I shall offer you one, viz. *Rx Empl. Diachyl. ireat. ℥ij. Empl. de minio ℥viij. Gum. Caranæ, Tacamahacca an. ℥iv. Benzoini, Styracis, Calamitæ, Succini, an. ℥ij. Styracis liquid. & Balsam. Peruvianæ an. q. s. Misceantur super ignem, deinde amove, & addantur merc. crudi ℥viij. cum terebinth. extincti, & fiant magdaleones.* These being spread upon Cloth thick and applyed, you must then put them into a warm bed, and with a draught of warm Posset-drink sweat them daily, and treat them as hath been said in the salivating by Unction. If it arise not by the first Plaisters you must apply fresh once in four or five days, and if there be occasion you may hasten the Salivation by a few Grains of *Turbith Mineral*. I have sometimes salivated persons by these Emplaisters, but for the most part I use them to raise a Salivation, or continue it in such where I began it with Internals, and to that purpose it is of excellent use.

The humours being evacuated by Salivation and Purging, *Sweating* will be necessary; therefore we shall now say somewhat of their manner of Sweating. They may sweat in Bed, or out of it. The *Bed* is proper for the weaker sort, and there they may sweat by Bottles of warm Water, or Bricks heated and placed about them, or they may sweat under a Frame. If they sweat with Bottles or Bricks, they must have many cloaths, as Blankets, &c. to cover them close, and the Bottles or Bricks may be wrapt in Napkins and applyed, accordingly as you design more particularly to sweat any one part. Generally they are placed on each side near the *Axilla*, the *Ischia* and at the soles of the feet. If you sweat with Bricks, let them be heated rather by boiling water than fire, lest in the bed they burn the Patient.

The way by a *Frame* is this; you are to fold a well aired Sheet four double, and lay it under the Patient, then his Shirt being stript off, the Frame must be placed over him, and a sheet over that Frame, and as many Blankets over that Sheet, and both Sheet and Blankets must be brought over the end of the Frame, and be tucked down close to the neck; then a pan of well burnt Charcoal or Spirit of Wine must be put into the lower end of the Frame: this done shut the door and take care that the heat be kept in, especially about the Patients neck lest it stifle him. His head ought also to be covered warm that it may sweat. If he took not his Sudorifick before he was placed under the Frame he

he may take it now; the Diet-drink must be warmed, and may be commodiously given with a Glass-pipe. There is required a couple of Servants to attend the Patient during his being in the Frame: The one of them must attend him with a warm Napkin to wipe the Sweat off his Face, and to give him cloths to rub his body, which cloths ought to be thrust in and taken out at the one side of the Frame. This Servant ought to have regard to his Master, that upon the least complaint he may give warning to his fellow to renew the fire or take it out according as there shall be occasion. The fire being removed and the sheet next the Frame somewhat cool, the one of his Servants shall hold the cloaths close to the Patients neck and shoulders, whilst the other draws the Frame away. Then shall they both tuck the Blankets and covering close to him, and give him another draught of his Diet-drink, and continue him in his sweat half an hour or more if he can admit it; then gradually cool him and pull away the wet folded sheet from under him; then rub him with dry cloths and put on his shirt; and if he be disposed to slumber an hour, he may; otherwise he may rise and dine at his pleasure. They commonly sweat 3 quarters of an hour in the Frame, and an hour in bed after the Frame is pulled away.

These are the ways of sweating in *Bed*.

The ways of sweating out of bed are by *Stove*, *Tub*, *Chair* or *Cradle*. The *Stove* is the most easie in regard they may sit, stand or walk up and down; but when they go out of them to bed, the danger is in taking cold, whence new pains do sometimes arise. Therefore those Stoves that are near to a good bed are best; the other which you must go up or down stairs to, are not allowable. *Tub* and *Chair* were the old way of sweating, but if the Patient swoonds in either of them, it will be troublesome to get him out; possibly he breaks his shins, if he did not hang some while by the neck before they got him out. To avoid which they must take them out upon the least complaint of fainting, and have some Cordial to relieve their Spirits.

In the *Cradles* they are subject to accidents by the disjoining of the Frame or breaking of the Girts, &c. but in every of these I have sweat my Patients with much safety, and so may you.

Bathing.

Bathing is of great use in the cure of this Disease, whether it be new or old. In the recent it serves to temperate the great heat and acrimony of the humours, especially in the *Gonorrhœa*.

In squalid and dry bodies where the *Lues* hath been long confirmed, Bathing is necessary to humect and rarifie the humours, and dispose them to salivate. They are also proper after the Patient hath passed through the strict course of Salivating, Purging, sweating, &c. The body being thereby dried and emaciated, is hereby cooled, moistened and restored to its natural temper.

In order to the Bathing we generally let Blood and purge, if there be *plethora*; but in poor emaciated dry bodies a Clyster may serve, or their bodies may be kept soluble by a lenient Bolus of *Cassia*, *Manna*, *Syr. Violar*, &c. and before the Patient enter into the Bath he may drink a draught of Caudle or Broth, and in the Bath he may take a spoonful or 2 of Harts Horn Jelly, &c.

The Vessel we bath in is a Tub, wherein he may sit up to the neck. For want of such, a Barrel may serve, the one end being beat out and a Stool placed in it to sit upon. The Bath Liquor is according to the occasion and quality of the Patient, sometimes it is all Milk, othertimes Milk and Water, or only Water, with a Bag of wheaten Bran, which serves the Patient as a Cushion, and makes the water milky. They are sometimes perfumed with *Lig. Cassie*, *Rhod. sant. citrini*, *Calam. aromat.* *Junc. odorat. flor.* *Ros. damasc.* &c. The Baths of Milk are apt to sour, therefore ought to be renewed daily, the other will last longer sweet. In the time of Bathing there ought to be plenty of hot and cold water of continue the Bath of a moderate temper, neither too hot nor cold.

Some

Some Hoops should be fastned over the Head of the Tub, whereon a Blanket or Sheet as a Canopy may be cast, in case the Air be cold. A Servant or two ought also to be attending in case of fainting, lest he sink into the water. Therefore upon his complaint raise him up, and casting a sheet about him put him into a warm bed, where he may refresh himself, and at his leisure arise and cloath himself, and dine or sup as his appetite requireth. They may bath twice a day, but never upon a full Stomach.

During the Cure of his Disease it will be requisite that the Patient keep his Chamber, and that it be made temperately warm; The taking of Physick and rambling a broad in the cold being extremely prejudicial to their Cure, and is frequently attended with a *diarrhœa*, or noise in their Ears with deafness. There is also a special care to be taken concerning their *Diet*, that on those days they purge, their Dinner be of good nourishment, boiled or roasted. We also allow them good Broth and Bear or Ale to raise their strength, so as they may be able to bear the evacuation which is required. But in the time of their sweating we confine them to a very slender and drying Diet, only sufficient to support their Spirits. A chop of a neck of Mutton, or two Ribs dry roasted was the old stint. I permitted them to make choise of some one sort of meat, and keep them to that, which among the better sort is a Partridg, and that without sauce. Their suppers may be Bisket, Raisons of the sun, and a few blanched Almonds, and their drink *decoct. sarsæ, &c.* But in weak and extenuated bodies, *China* Broths, or a mixture of Milk with their Diet-drink may be necessary.

Exercise is of use in the beginning of this Disease, and may serve to rowze the Native heat, to thrust forth the malignity, and waste superfluities. But after the disease is more confirmed, violent Exercise is hurtful exhausting the Spirits too much, and renders them less able to resist the Malignity.

Sleep is allowed in the day to refresh them, they being for the most part disturbed in the night by their pains, which are therefore called *Nocturnal*.

In the time of Salivation they must sleep when it affects them. To sleep also after Bathing and Sweating is necessary to refresh them.

Venery ought to be avoided during their course of Physick, it being one main cause of the unsuccessfulness of it: Yea, the very thoughts of it is destructive to their healths; nay, though he believed himself Cured, I would not have him over-confident that way till he hath passed a Spring or Autumn. For if he be married, and bed with his Wife, and afterwards relapse, he may possibly fancy that she infected him; which may not be unlikely, if he bedded with her before he entred into Cure. However it was, the consequence of it may be very ill, and may cause a loathing in him of her Bed, when it's possible he was not well Cured, and would have relapsed with a *Gonorrhœa* or *Chancre*, though he had not touched any Woman.

The *passions of the Mind* ought to be calmed, and the Patient to be well satisfied in the integrity and skill of his Physician or Chirurgeon, that he may the more chearfully submit to the Rules prescribed in order to this Cure.

C H A P. III.

Of the Specificks in this Disease.

IN the former Discourse I had occasion to speak of the *Decoct. Sarsæ, &c.* as sudorificks. Indeed those kind of Decoctions are the great hinges on which the Cure depends, as being supposed to contain in them besides the Sudorifick Vertue other Specifick qualities. Which appropriation of some

Simples to the Disease more than others make it necessary, before I proceed any further, to discourse of the nature of these Specificks, which I reduce to three heads, viz, either *Vegetable*, *Antimonial*, or *Mercurial*.

Specificks. The *Vegetables* are usually reckoned these; *guajac. lign. & cort. sassafras, rad. chinæ, sarsaparilla, saponaria*. Of these all but *saponaria* are known Sudorificks, and may easily be supposed to perform all that is pretended to by them, by that only faculty, unless we please to add dulcification. Whether *Saponaria* be a Sudorifick I know not; nor indeed whether it ever cured the Pox otherwise than in conjunction with the former Specificks, and so any other Herb will do it. *Laureola* is in the West of *England* much commended. I suppose what it doth is only by strong purging, and when it is mixed in Diet-drinks, it serves to keep the Body open. What other Vertues it hath I know not.

Antimony and *Mercury* are Medicaments of so large a compass, that they take in all the intentions of Physick. Hence we have Vomits, Purges, Sudorificks, Salivations. Vomiting and Purging are certainly of great use in this Disease; so is also sweating, which is very effectually procured by several preparations of both these, viz. *Cerussa Antimon. diaphoret, &c. Bezoard. Minerale, Æthiops Mineral. &c.* They have the vogue of exceeding other Medicine both by their strength and power of dulcification. And therefore it is that in purging also we make so much use of Mercurial preparations. But that Mineral hath also another faculty more eminent than all these, so peculiar to it self, that we find not yet any other Medicine, Vegetable or Animal that can imitate it, and that is Salivation; by Vertue of which it melts down the serum of the blood and with it all the acid Venom contracted in it by this disease, bring it away by the Mouth.

These are the so highly commended Specificks, of which the former are the constant Ingredients of the Decoction to be taken during the whole Course, but are accommodated to the Palate and other necessities of the Patient by the addition of other Simples. Mercury is also boiled either crude or prepared. So is Cinnabar and Antimony: which Practice I have declined, and therefore I shall not say more of it. I shall only proceed to inform you how to mix other Simples with these already mentioned as occasion shall require.

First therefore for aromatization we add *sem. anisi, fenic. dul. coriand. calamus aromaticus, lig. Aloes, cassia*: for other gratefulness *Liquorish, Raisins, Ivory, Hart-horn*. In complication of Diseases, if the head be affected, we add *Betony, Sage, Rosemary*. If the Breast, *adanth. tussilago, scabiosa, mar-rubium, Hyssop, Figs, Dates, Sebestens, Jujubes*. If the Heart, *rad. angelicæ, borag. Violets, Balm, scorzonera, scordium, Clove gillyflowers, Saffron*. If the Stomach, *Wormwood, Agrimony, centaur. card. benedict.* If the Liver, *Rhubarb, Turmeric, Liverwort, Succory, Dock-root*. If there be Dropsie joyned with it, then *Briony* of both sorts, *Spurge, Laurel, Esula*. For the Spleen, *Dodder, Fern, Capers, Tamarisk, Spleenwort, Germander, Calamint, Hellebor, &c.* In the diseases of the Kidneys, the five opening roots, also *rad. althææ, gram. rusci, alkekengi, eryngii, the cold seeds, &c.* If the Colick infect the Patient, *bacc. laur. juniperi, Galangal, Zedoary, &c.* Then there are the greater and lesser *Scorbuticks*, also *rad. bardan. & petasitidis*, which are believed to have Vertue to mitigate Pain in the Membranes of the bones, and resolve nodes; also *rad. caryophyllatæ consolid. bistort. tormentil.* and many others which are thought proper to be added to decoctions, and to medicate Ale or Hydromel. All which several forms of Medicines may be varied according to several intentions. In weak Stomachs we add Wine to the Decoctions. In emaciated bodies Milk. Of the *Sarsa* Decoctions I shall for the ease of the young Chirurgeons, set down some particular prescriptions, such as I have seen prescribed by worthy Physicians, and have practised with my self successfully.

℞ Sarsaparillæ ℥viii. lig. guaiaci ℥iv. cort. ejusdem ℥ij. lig. sassafr. ℥iiss. ras. ^{1. Decoct.}
corn. cervi, eboris an. ℥vj. infund. per noctem in aq. font. ℥xxx. deinde coq. in ^{Sarsa, &c.}
vase clauso ad tert. part. consumpt. addend. sub finem fol. saponar. cum radicib.
M. ij. fol. agrimon. veronicæ utriusq; an. M. j. passular. enucleat. ℥vj. sem. fœnic.
dul. coriand. an. ℥vj. liquiritiæ Hispan. ℥ij. aromatizetur colatura cum pauco
cinnamomi pro usu.

℞ Sarsaparill. ℥vj. lig. sancti, ℥iiij. cort. ejusdem ℥j. lig. sassafr. ℥ij. rad. bardan. ^{2. Decoct.}
scorzoner. an. ℥j. santal. albi citri an. ℥ss. fol. laureol. preparat. cum aceto M. ij. ^{Sarsa, &c.}
passular. enucleat. ℥iv. rad. glycyrrhizæ ℥j. sem. fœnic. dul. coriand. an. ℥ss. infund.
in aq. calid. ℥xij. coq. ad tert. part. consumptionem.

℞ Rad. sarsaparill. ℥vj. lig. guaiac. ℥iiij. cort. ejusdem ℥j. rad. chinæ nodos. ^{3. Decoct.}
℥iiij. lig. sassafr. ℥iiss. ras. C. C. eboris an. ℥j. rad. bardan. ℥iiij. santal. rub. ^{Sarsa, &c.}
alb. calam. aromat. an. ℥vj. passular. ma. exacinat. M. j. sem. anisi, fœnic. an.
℥ss. infund. in ℥xvj. aq. font. per horas 24 in loco calido in vase bene clauso,
deind. coq. lento igne ad consumption. tert. partis, addendo sub finem decoctionis
fol. summitat. uphrasiæ, beton. salviæ sic. & flor. 3. cordial. an. P. cassiæ
lig. ℥ss. nuc. moschat. n° 2. coletur pro usu.

℞ Sarsaparillæ ℥viii. scobis guaiaci ℥iv. sassafr. ℥ij. rad. bistortæ, bardanæ ^{4. Decoct.}
tormentilla consolid. masc. an. ℥ij. fol. agrimon. scolopend. utriusq; ceterach, ^{Sarsa, &c.}
endivia cum toto an. M. j. sem. anisi, fœnic. dulc. coriand. an. ℥ss. passul. ma.
enucleat. ℥iv. liquiritiæ ras. ℥iiss. post debitam macerationem in aq. font. ℥xxx. coq.
lent. igne ad medias, aromatizetur cum pauco cinnamomo.

℞ Sarsaparillæ ℥iv. lig. guaiaci ℥iiij. cort. ejusdem ℥ij. sassafr. ℥iiss. rad. petasi. ^{5. Decoct.}
tidis, bardanæ an. ℥iiss. lig. Rhodii, santal. citr. an. ℥j. sem. cardui benedict. ^{Sarsa, &c.}
juniperi recent. an. ℥vij. cort. exterior, citri siccat. ℥ij. infund. in aq. font. ℥xij.
per noctem, & coquantur ad dimidias.

℞ Sarsaparillæ ℥vj. chinæ ℥iiij. sassafr. ℥j. lig. nephrit. ℥ij. ras. C. C. & eboris ^{6. Decoct.}
an. ℥iiss. santal. albi ℥ss. petroselini, graminis, rusci, eryngii an. ℥j. liquiritiæ ℥ij. ^{Sarsa, &c.}
dactyl. exossat. n° vj. sem. carui, coriand. an. ℥iiij. infund. in aq. font. ℥ix. co-
quantur s. a. & aromatizetur cum lig. Cassia.

℞ Rad. Sarsaparillæ ℥vj. ras. C. C. santal. alb. an. ℥ij. sol. sapon. agrimon. beton. ^{7. Decoct.}
an. M. j. liquiritiæ Anglic. Hispan. an. ℥ss. f. infus. & decoct. in aq. font. ℥ix. ad ^{Sarsa, &c.}
℥vj. vase clauso. Colaturam effund. super fol. cochlear. hortens. M. vj. post debitum
refrigerium fiat secunda colatura.

℞ Sarsaparillæ ℥ij. scobis guaiaci ℥j. cort. ejusdem ℥ss. lig. sassafr. ℥j. rad. tormen- ^{8. Decoct.}
tillæ, bardanæ, vincentoxici an. ℥ss. ras. buxi & lig. Rhodii an. ℥iiij. baccar, juniperi ^{Sarsa, &c.}
recent. ℥ss. sem. cardui benedict. & oxalydis an. ℥ij. flaved. citri ℥j. f. infus. in
duabus partibus aquar. petroselini, parietariæ, melissæ, & una vini albi, utriusque
ad ℥vj. & post macerationem coquantur ad medias: colaturæ add. guttas aliquot
sp. vitriol. aut sulphuris, & reservetur. pro usu.

℞ Sarsaparillæ ℥iv. lig. guaiaci interioris resinosi ℥iiij. cort. ejusdem ℥j. sassafr. ^{9. Decoct.}
℥vj. rad. bardanæ, scorzonera, contrayervæ, tormentillæ, petastidis an. ℥iiss. mace- ^{Sarsa, &c.}
rentur in ℥iv. vini albi tenuis super cineres horas 24. deinde additis aq. font. ℥xij.
coq. ad medias, addendo sem. anisi, fœnic. dulcis, coriand. an. ℥iiij. liquiritiæ ℥ij.
coletur pro usu.

℞ Sarsaparillæ ℥x. rad. chinæ ℥iv. rad. siliis sem. rec. ℥iiij. santal. albi ℥ij. ras.
cornu cervi, eboris an. ℥iiss. infund. per horas xij. in aq. hord. ℥xxx. & coquantur
ad tertia partis consumpt. sub finem addendo passular. ma. enucleat. ℥ss. deinde
fiat colatura per manicam Hip. addendo pro singulis libris liquor sacchari optimi
℥j. sem. coriand. ℥j. & reservetur in lagenis lagideis subere obturatis in loco sub-
terraneo frigido.

After Decoction some of the following Electuaries may be prescribed to ^{Electuaries}
provoke Sweat, the Patient drinking a Draught of some of the foremention-
ed Drinks warm after them.

℞ Sarsaparillæ pulver. ℥ij. lig. guaiaci interioris resinofi ℥ss C. C. usti troch. è viperis an. ℥j. santal. citr. tormentillæ, succini an. ℥ss. antimonii diaphoret. ad pondus omnium, cum syrup. de pomis alterant. de rubo idæo an. part. æq. f. electuarium Dos. ℥j. superbibendo decoct. sarsæ ad sudorem provocandum.

℞ Sarsaparillæ pulv. ℥v. rad. chinæ nodosæ ℥j. oculor. cancr. cerussæ antimonii an. ℥iij. gum. guaiaci ℥ss. Bezoard. occident ℥j. ambregriseæ gr. viij. confect. alchermes ℥j. syr. è cortic. citri q. s. opiatum.

℞ Bezoard. minerale ℥j. pul. viperar. ℥ss. Mf. f. bolus cum syr. de cort. citri. Sum manè superbibend. haust decoct. sarsæ, &c.

℞ Antimonii diaphoret. gr. xiv. lapid. contrayervæ, ol. sassafr. gut. iij. confect. alchermes q. s. f. bolus, capiat ante ingressum hipocausti.

In case of Pain or Diarrhœa from Mercury, ℞ Antimonii diaphoret. ℥ss. laudani gr. iij. conf. ros. rub. ℥j. syr. garyophyl. q. s. Mf. sumat hora. somn. Or, ℞ Diascordii ℥j. lap. bezoar. orient. gr. vij. C. C. usti. gr. x. confect. alcherm. ℥j. cum ol. cinnamomi gut. 5. f. bolus; sumat hora somni. Or, ℞ Conf. rub. vet. ℥j. theriac. Venetæ ℥ss conf. lujulæ, ℥j. laud. gr. iij. confect. alchermes ℥j. sumat bis in die.

These following Prescriptions are Sir Theodore Mayer's.

Medic.
Antisiphyllicum.

℞ Guaiaci ℥iv. cort. ejusdem ℥ij. sarsaparilla ℥vj. gum. guaiaci troch. viperar. an. ℥ss. C. C. primar. recent. succini albi corall. rub. margaritar. an. ℥j. santal. citr. lig. Rhodii, ras. buxi, rad. aristoloch. utriusque, gentianæ, valerianæ utriusque, Asclepiadis, scorzonæ, angelicæ imperatoriæ, tormentillæ, contrayervæ, zedoariæ, pæoniæ maris, cypri, enul. campan. an. ℥vj. folior. sicc. scordii, chamædryos, chamæpitios, centaur. min. meliss. rut. calendul. anthos, lauri veranicæ utriusque, ulmaria an. ℥x. cort. citri & aurantior. siccat. an. ℥iij. sem. anisi, fœniculi, card. benedict. nigellæ Roman. pæon. an. ℥v. baccar. junip. ℥ij. myrrh. styrac. calam. benzoin. croci an. ℥ss. fiat omnium pulv. subtil. cui adde pro singul. ℥vj. mellis despumati ℥ij. fermentetur per duos aut tres menses. Dosis ℥ss. superhausto decoct. sarsæ, &c. ad sudoris provocationem semel quotidie per xxx dies: & si catharticam cupis, adde pulver. senna, turbit. & hermodactylor. an. ℥j. pro dosi.

℞ Ras. lig. guaiaci ℥iv. cort. ejusdem, ras. buxi an. ℥vj. sassafr. china an. ℥x. cort. median. ulmi, fraxini, radicum vincentoxici, scorzonæ, tormentill. bardan. petasitidis, baccar. juniperi an. ℥ss. santali citri lig. Rhod. an. ℥iv. rad. cichor. ℥iij. sem. cardui benedict. coriand. prap. an. ℥ij. fol. agrimon. pimpinell. beton, salvia, hepat. an. M. ij. sem. balicacabi, meliss. milii solis an. ℥iij. flavedinis exterioris cort. citri siccat. ℥iv. turbit. sennæ, hermodactylor. an. ℥vj. vini albi tenuis ℥xxx. incisa vel contusa macerentur 24 horas in prædicti vini ℥xx. & coq. ad medias. Liquor calidus indatur doliplo, & affundantur residuum & obturetur, sinantur resiquatriduum, postea bibat. ℥vj. mane & sero.

℞ Ras. guaiaci ℥x. cort. ejusdem sassafr. an. ℥iv. sarsæ ℥viiij. passul. ma. enucl. ℥ij. rad. bardan. siccat. tormentill. scorzonæ. contrayerv. an. ℥iij. bacc. juniperi ℥iij. fol. agrimon. pimpinell. siccat. an. M. j. coquantur in sacculo laxo in gallionibus vj. ad 4 partis consumptionem; postea infund. in alio sacculo in prædicti liquoris ferventis colati gall. iv. fol. sennæ sem. carthani contus. an. ℥ss. cort. & rad. esulæ ℥iv. hermodact. turbit. gummosi an. ℥vj. sem. anisi fœnic. dul. coriand. an. ℥iij. & suspende mal. aurant. garyophyllis transfixum; fiat in doliolo castæ capacitatis fermentatio, & postea obturetur vasculum, & bibatur mane & vespere cum diata tenui & exsiccante.

℞ Utrumque sacculum post debitam coctionem & infusionem nec non mediocrem expressionem in liquore prædicto, & coquantur in cervisiæ recent. gall. viij. ad quartæ partis consumptionem pro potu ordinario. Aromatizetur cum aurantiis duobus transfixis garyophyl. & flaved. cort. citri & pomor. fragantium.

Aqua Antisiphyllica, Sir Theod. Mayer.

℞ Succor. recent. express. fol. bardan. petasitidis, cardui benedict. card. Mariæ, calendulæ, ulmarie scabios. meliss. canabis aquat. taphi barbati, salviæ, beton fraxini, chamedryos, pimpinell. hyperici an. ℥ij. dent. leonis, cichorei, lujulæ, acetosæ, oxylapathi, nasturtii aquat. cochlear utriusque, becabungæ an. ℥iij. rad. recent. filicis

filicis sæmin. ℥ij. hardan. petasitidis, caryophyl. pentaphyl. tormentil. enulæ campanæ, cypri, valerianæ utriusque, pæon. maris an. ℥ij. calami aromat. ireos Flor. gentian. zedoar. aristoloch. utriusque, vincentoxici, cort. citri, aurantior. an. ℥vj. ras. lig. sanct. sarsæ an. ℥ij. cort. lig. sancti, buxi totius, sassaf. lig. Rhod. santal. citri an. ℥ss. baccar. juniperi ℥ss. sem. anisi, coriand. sænic. dul. pæon. an. ℥vj. vini albi tenuis ℥vj. aq. fontis ℥xxx. Radices & ligna macerentur in vino super cineres calcid, per. hor. 24. addantur postea succi & aquæ, & distillentur in vase æneo amplo cum capitello, & coletur post validam magmatis expressionem. Fiat liquoris expressi destillatio ad mellaginem, quæ addito saccharo aut melle defumato reservetur in vase bene clauso. Magmati affunde aq. font. ℥ix. & post duor. dierum macerationem destilla pro aq. secundaria minus forti, quæ cum primaria in morbis minus contumacibus misceri potest, aut cum decocto secundario guaiaci pro potu ordinario.

CHAP. IV.

Of the Cure of the Symptoms.

THAT which now remaineth to be considered of, is, the right application of Medicaments in curing such Symptoms as the *LUES* is subject to. *Fallopious*, and others, who taught to Cure this Disease by *Galenical* Remedies, have taken much pains in contriving Medicaments for the curing the *Chancre*, *Herpes*, &c. but that will be needless here. The Method of Cure I have proposed by Internals will enough contribute to the Cure of all the External Symptoms; so that only which is required from us, will be the resisting the Fluxion till our Internal Remedies have taken place.

In Inflammations, Swellings and Excoriations of the *Penis* and *Pudenda*; R *Summitat. rubi, equiseti, ling. cervin. fol. plantag. an. M. j. flor. ros. rub. M. ss. coquantur in aq. font. ad ℥vj. Colaturæ adde mellis com. ℥ss. aluminis roch. ℥iij. iterum sinant parum bullire, & decoctum despumetur.* Foment the diseased Parts, and inject of it between the prepuce and the glans, or in the *pudendum*. If there be required more deterfion (through the neglect of the Patient in not discovering the Malady more timely) add *mel. Ægyptiac.* proportionably as you see cause, and dip the Pledgits of Lint in the Lotion, and apply them upon the Ulcerations. If the Ulcer be in the *Urethra*, R *aq. germinum querci, plantag. & fragariæ an. ℥ij. troch. alb. Rhafis pul. ℥ij.* If that place be affected with a Chancre, then add *mel. Ægyptiac.* instead of the Trochisk. But if the Chancres arise in such places where you can see to apply the Medicament, touch them with *lac. sublimat.* or apply Pledgits of Lint dipt in it, and press'd out. If this prove too sharp, dress them with the former Decoction.

If a Swelling arise in either or both the Groins, and no other Symptom of Chancre, &c. afflict the Patient, endeavour Suppuration by such like Emplaster: R *gum. galban. ammoniaci an. ℥ij. opopanax, sagapeni an. ℥j, sem. sinap. pyrethri pulv. an. ℥vj. sapon. com. ℥ij. picis Burgund. ℥iv. ol. lilior, ℥ij. ceræ q. s. f. empl.* After Suppuration open it, and treat it as hath been elsewhere said in the Chapter of *Bubo*. But if there be a Chancre, &c. accompanying it, do not attend Suppuration, but purge it out with Antivenereals.

In Ulcers of the Tonsils and Palate: R *Trachelii totius M. iij. caprisolii, prunella veronicæ masc. an. M. j. flor. ros. rub. P. j. santal. rub. lig. juniperi an. ℥j. f. decoct in aq. bord. ℥iv. coq. ad tert. partis consumptionem. In colat. dissolve syr. de ros. siccis, diamori. an. ℥iij. mel. elatim. ℥ij. f. lotio.* With this the Ulcers may be washed daily, either by a Syringe or Gargling. But if the Ulcers be behind or over the Palate, the best way to cleanse them will be to pass the Injection up into the Nostrils. During the while the Patient must hold his mouth full of water to prevent coughing and kecking. If the Ulcers be sordid, dress them with *lac. sublimat.* upon an armed Probe. If there be *Caries* in the *os palati*, touch

it with *aq. divina Fernelii*. In case the Bone be corrupted through, it will be necessary that the place be supplied by some Plate, or Paste: The former are made of Silver or Gold by our Workmen to good advantage.

Those of Paste may be made as followeth: *R. mastic. pellucid. pulver. ʒj. e-molliatur in sp. vini, alibani, sandarac. cum guaiaci naturalis, sang. Draconis, rad. iridis Florent. myrrh. C. C. usti, succini an. ʒj. Ms. & f. pasta ex qua formetur lamellæ.* Which being fitly applied to the part, will dispose the Ulcer to heal, and serve those ends you design it. But if some part of that Bone be carious, *R. Lamina prescriptæ ʒj. aristoloch. rot. ʒj. rad. pucedani, gentianæ an. ʒss. caryophyl. ʒij. pulveriz. & misceantur cum pauco terebinth. Cypr. f. a. pro usu.*

In *Ozæna* or Ulcers of the Nose, and *Os ethmoides*, the matter usually mixing with the excrementitious Humours dryeth in the Passage, and thereby prohibits the discharge, and increaseth the Ulceration, and also the Caries: therefore you are in the first place to supple and remove that by casting up mucilaginous Decoctions of this sort: *R. hord. mund. ʒj. rad. altheæ ʒij. sem. cydon. ʒiiij. liquiritiæ ʒij. coq. in aq. font. ad ʒij. colaturæ add. olei amygd. dulc. ʒiiij. injiciatur sepe in die.* The mucus being thus removed, inject some of these following.

R. Sarsaparillæ incisæ ʒiiij. infunde per debitum tempus in ʒiiij. aq. plantag. deinde coq. ad medias: ante finem adde fol. agrimon. salviæ min. summit. rubi an. M. j. flor. ros. rub. balaust. an. Mss. colatura sæpius chalybeatur, & adde alum. roch. ʒij. f. injectio.

R. Succ. beton. ʒij. succi scrophulariæ maj. ʒvj. succor pimpinellæ, caprifoliæ an. ʒiiij. mel. rosat. colati ʒiv. mel. com. ʒiiij. coquantur ad consistentiam mellis pro usu.

R. Aq. calcis ʒij. mel magistralis ʒiiij. M. f. Which aqua calcis is thus made.

R. calcis vivæ ʒij. aq. pluvie ʒxij. coq. ad tertias, filter it through a brown paper for your use. Or, *R. aquar. ros. rub. beton. majoranæ an. ʒiv. sp. vitrioli dulcificati gut. xxx. mel. magistralis superscripti ʒij.* These will deterge the Ulcers, and the while you may by Antivenereals hasten the exfoliation of the bones, and consolidation of the Ulcers. In the extirpation of verrucæ, mariscæ, condylomata, ficus, &c. *aq. divina, lac sublimati, sp. vitrioli, & lap. causticus* are proper: Where these will not serve your purpose, the Ligature of Knife or actual Cautey will: but the recidivation of them must be prevented by Antivenereals.

To cure fluttering Noise in the Ears, &c. arising in this Disease.

R. Cort. guaiaci ʒj. cort. sassaf. ʒij. castorei ʒiv. flor. lavendulæ ʒiss. caryophyllor. ʒss. sp. vini rectificat. ʒviij. f. infus. in vase vitreo per horas 24 super cineres calidos; colatura usui servetur: indatur auribus quotidie tepide cum bombyce.

To alleviate Pains, *R. axung. suillæ ʒiv. ol. scorp. ʒij. ol. chamæmel. roris-marini, salviæ chymic. an. ʒss. olei petrolei, spicæ an. ʒj. laudan. Londinensis ʒj. plus aut minus misceatur;* and embrocate the part affected.

If there be *Gummata*, apply *empl. è bolo, &c.* To prevent Ulceration till Internals take place. If *Nodes* be the cause of the pain, foment them with *sp. vini* wherein *Opium* and *Saffron* hath been dissolved: Or, *R. empl. de Vigone quater duplicato mercurio ʒiiij. rad. bryoniæ nigre siccata pul. ʒvj. cinnab. ʒiiij. croci ʒiv. opii ʒij. ol. nuc. moschat. ʒj. terebinth. q. f.* Or a Solution of *argent. viv. in aq. fortis cum axung. porcina & cera f. ceratum.* If you proceed higher, and ulcerate the Skin, this Liniment of *Hartman* will do it. *R. unguent. aurei P. iij. merc. sublimat. P. j.* If you apply it thick-spread it will eat to the Bone, and if it be not kept within compass it will ulcerate the Skin as far as it spreads; but being discreetly applied it seldom fails: But in my Practice I rarely use any of them, unless it be in People who by reason of their weakness are not able to bear a severe course of Physick; for in others I commonly resolv'd them by virtue of the internal Remedies: they resolving either in the time of salivating, or sweating. Nor do I lay open the *Gummata*, unless they be in *Cranio*, and there

there indeed we ought to open them, to prevent rotting of the bones and membranes underneath. But when Ulcers with *Caries* come under my hands, I dilate the Ulcers, and make way to the bones, and treat them as hath been set down in the Chapter of Ulcers with *Caries*; they not differing otherwise, save that in these the Patient ought to continue in the use of Antivenereals during the Cure. In consideration that these diseased people are confined to their Chambers during their Cure, it will be reasonable to make their confinement as pleasant as we can; to which end the following Perfume may be useful.

R. gum. guaiaci ʒj. mastich. benzoini an. ʒij. styracis. calamitæ. lig. rhodii, aloes. flor. ros. damasc. santali, citri, juniper. summitat. rorismarini, lavendulæ. majoranæ an. ʒʒ. omnium pulvis crassiusculus, qui cum aq. ros. irroretur; huic additâ dupla quantitate carbonum salicis cum mucilagine tragacanth. in aq. napthæ extract.

Observations of the Species of Lues Venerea.

A Young Man having been debauch'd into lascivious Company, complained to me the day after, and shewed me the Prepuce much inflamed and swelled and turned backward; there was also an excoriation between the *glans* and part of the Prepuce. I fomented the *penis* with red Wine, and applied pledges of lint pressed out of the same on the excoriation, and *ung. alb. camphorat.* over all, leaving a passage for Urine. Then let him bleed in the Arm about 10 Ounces. A Clyster was administred some hours after, and that night at his going to bed I sent him a *Bolus* of *cons. ros. ʒʒ. mer. dul. ʒj.* and purged it off the next morning with *Manna* in Posset-drink, and dressed him the same Morning with *decoct. plantag. summitat. rubi, equiseti, &c.* By this Method of Dressing; and by the repeating the use of the *mer. dul.* alone, and with Purgatives, I dried up the Ulceration and Inflammation, leaving the Prepuce lax as formerly. I had thoughts of prescribing him a longer course, but he continued well without it.

1. Observation of inflammation and excoriation of the *Penis*.

Another came to me with an inflammation of the Prepuce, it was swelled over the *glans*, and by the quantity of fetid matter which discharged I supposed a Gonorrhœa, at least a great excoriation between the Prepuce and *glans*. I fomented it with *decoct. plantag. summit. rub. equiset. &c.* and injected some of it with Syringe, and lapped a stupe about it, and continued that Method of dressing it twice a day; sometimes adding a little *mel. Ægypt.* to the Decoction. I also let him bleed, and repeated the method of Purging, as in the former observation, till I had healed the Ulceration, and relaxed the swelling. Then returning back the Prepuce, and observing that the fetid Matter had proceeded only from an Excoriation between the Prepuce and *glans*, I dismissed him without putting him into other Course of Physick.

2. Observation.

One came to me with an inflammation and great swelling of the *glans* and Prepuce, this latter being turned back in *coitu* straitned the *glans*, and hasten'd those accidents of Inflammation, &c. and would soon have gangrened in spite of all Applications. To prevent which, I prepared to divide that part of the Prepuce, which made the stricture. It was not easie to find the way to it, be reason of the inflation of the upper tunicle; but having passed a director under it, I cut thro' the stricture, and gave liberty to the *glans*, then fomented the diseased parts with the *decoct. plantag. &c.* and rouled a hot stupe over it, then let him bleed, and treated him as venereal. The next day I found the swelling diffused, and the Prepuce lie flaccid and natural; the wound cured in the skin a few days after by the common applications. This turning back of the Prepuce is frequently seen in young Lads, who wantonly handle it. Sometimes it happeneth in Conjugal Rites, and not being returned soon over again, it straitens the *glans*, and accordingly hastens the accidents of inflammation. The Cure is effected by timely fomenting with emollients; but if that way fail, you must divide

3. Observation of inflammation of the Prepuce.

vide the Prepuce as abovesaid. In some of those who have the Prepuce very short, the *frænum* is also so strait, that upon the erection of the *Penis*, the *Glans* is pulled downwards, so as they cannot endure coition. The Remedy is by cutting the *frænum* in pieces. If you suspect that the divided end may be troublesome, clip them off at the same time, then put a dossil of dry Lint close between the *Glans* and that part of the Prepuce to prevent the coalition of them.

4. Observation of the Prepuce gangrened.

A young fellow came to me with the Prepuce inflamed, and a Mortification on the upper part of it, which had spread the compass of a broad Shilling on that part over the *Glans*. In Scarifying the *Escar* I found it had penetrated through: upon which consideration I made the separation of the Prepuce with a pair of Scissors cutting it off round, then dressed it *cum pul. Galeni & albamine ovi*, the next day I gave him a Lenitive *Bolus*, which purged him moderately. In the making the extirpation of the Prepuce I had permitted him to bleed freely, and by the Lenient purge his Body was cooled, so that at the next opening I found the Sore digested. I dressed it with *digest. ex terebinth.* and the excoriation about the *Glans* with *unguent. alb. camph.* The day after I purged him again with the same Lenitive and *calomel.* By the reiterating of those Purgations he was freed of the malignity. The *Penis* was cured by the common Applications in such cases proposed in the method of Cure.

5. Observation.

One coming to me with a Chancre on the outside of the Prepuce with *calculus*, I sprinkled it with *merc. præcipit.* and applied a Pledget of *unguent. diapompholyg.* over it with a Bandage, then let him bleed and purged him with *decoct. amayum*, giving him *merc. dul.* every other night, sometimes two nights together. After the Application of the Precipitate 2 or 3 times, I dressed the Chancre only with a Pledget pressed out of *aq. calcis*, by which with the help of the Internals, it was soon cicatrized and the *callus* resolved. The Reliques of the Disease which I supposed to be lurking in the Body carried off by the continued use of the Antivenereals, and concluded the course *decoct. sarsæ*, sweating, &c.

6. Observation.

A Man of about 16 years of age, of a full Body came to me with a Chancre between the *Glans* and the Prepuce on the right side. I dressed it with *lac. sublimati.* I let him bleed and purged him with an infusion of *sena, rhab. &c.* in a *decoct. tamarind.* with *syr. de spina cervina*, and *syr. ex infus. ros. cum agarico.* The same night after his first sleep he took $\mathfrak{zj}$. *calomel.* in $\mathfrak{z\beta}$. *conf. cichorei*, and the next morning I purged it off with some of the former infusion. The second day after I purged him with *pil. cochiae min.* $\mathfrak{z\beta}$. *merc. dul.* $\mathfrak{zj}$. and from that day purged him proportionably as his strength would bear, increasing or diminishing the one or other of them so as to avoid making his Chaps sore. The Ulcer being thus cured, and no hardness remaining; I then prescribed him a *decoct. sarsæ, &c.* and designed the sweating of him; but he finding himself well, thought it unnecessary, and did not drink four quarts of his Diet-drink, yet continued without relapse.

7. Observation.

One of about 40 years of age, of a gross Body had a small Chancre on the left side of the *Glans*, I sprinkled it with *merc. præcipit.* and applied over it a Pledget of *unguent. diapomphol.* then let him bleed, and the next day purged him with *pul. cornichini* $\mathfrak{zj}$. which gave him 14 or 15 Stools. The day after I purged him again with *pul. cornichini* $\mathfrak{z\beta}$. *mer. dul.* $\mathfrak{zj}$. I dressed the Chancre with a Solution of *mel. Egyptiac.* in a little of the *decoct. plantag. equiset. &c.* upon Lint, and left some of it with him to dress himself daily. I also left with the Patient some Papers of *pul. cornic.* with and without *calomel.* which he took interchangeably. He had a strong body, and being pleased with the working of the Physick he took it daily, and many days after the Chancre was cured, and the hardness resolved: but the weather growing cold he neither drank his Diet-drink, nor sweat; nor in truth did I think it so very necessary.

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A month or two after he shewed me a round crusty Ulcer rise upon his Arm, and such another upon his Thigh and Breast; I let him blood and repeated purging, and by three doses of *Turbith Mineral*. given at distant times, purging him between each dose, I avoided the making his chaps sore, and dried the Ulcers, and by a course of Diet-drink and Sweating secured him from relapsing.

A man of about 36 years of age came to me with some small corrosive little Ulcers on the *Frænum*, and on each side of it; also a large Chancre in the very entrance into the *Urethra* with a hard *callus* round that part of the *Glans*. I toucht the Ulcers with *lac sublimat.* and applied over them pledgets pressed out of the vulnerary Decoction. I let him blood soon after, and gave him that night ʒj. *calomel.* and purged it off the next day with an infus. of *Sena*, &c. For the more speedy relief of the *frænum*, I gave the next Morning ʒʒ of *Turbith Mineral*; it vomited him thrice: after which I gave him a draught of the infus. of *Sena*, and purged it downwards. By this I checked the erosion in the Ulcers, but the *frænum* was so far fretted, and withal so painful, that I divided it, and with the Vitriol stone rubbed the broken ends thereof, and continu'd dressing it as abovesaid, and by frequent repetition of Antivenereal purgatives, I cicatrized those Ulcers about the *frænum*. The Ulcer within the *Urethra* healed also much about the same time. The *callus* on the top of the *glans* joining to it was a longer work, but was resolv'd by the same way of purging: After which I put him into a strong decoction of *sarsa*, and sweat him with *antimon. diaphoret.* &c. purging him with *pil. cochiae min.* and *precipitat. alb.* every fourth day, by which course I confirm'd his cure.

8. Observation of a Chancre in Urethra and Frænum.

9. Observation of a Chancre with inflammation.

9. Observation of a Chancre with inflammation.

10. Observation of Chancres and Ulceration.

A young fellow whom I had cur'd of a Chancre between the *Glans* and Prepuce, and was putting him into a course of Diet-drink and Sweating, pretended some extraordinary business for two or three days, in which time he came to me with an inflammation and excoriation of the *penis*, with a small ulceration on the top of the *glans*, and would have imputed it to my not having well cured him: but its recency with the inflammation demonstrated sufficiently that it was a new Clap, and I was obliged to him that he came to me again for cure. Others of his metal have not been so kind. I repeated venæsection, and dressed him with the *decoct. plantag. summitat. rub.* &c. as it is set down in the method of cure, and purged him with *pil. ex duobus* & *calomel.* increasing and diminishing the one and the other to avoid the making his chaps sore: then by a course of Diet-drink, Sweating and Purging finished the Cure.

One of about 36 years of age came to me with the Prepuce inflamed and swelled over the *Glans*, the end of the Prepuce being carnosus, and contracted so close, that I could scarce get in my Probe. The *Glans* felt hard and unequal, and much fetid matter discharged from between it and the Prepuce, which certainly demonstrated Chancres and great Ulceration of some continuance. He had also swelled Glandules in both his Groins. I fomented the swelling with *decoct. malvæ, tap. barbat. sem. lini, sænugræci*, &c. and injected the vulnerary decoction with *unguent. Egyptiac.* and put in a short tent of *rad. gentianæ* dipt in *oleo lilior.* into the contracted Prepuce, with directions that he should put in a fresh one so often as he should Urin, or Syringe himself. To which purpose he had many prepared bigger and lesser. That day I let him blood, and directed a Clyster, and purg'd him the next morning with *pil. cochiae min.* & *merc. dul.* and repeated the said Physick according to his strength, proportioning the *merc. dul.* so as to avoid salivating. By this method and by his course of Diet with *Sudorificks*, the Ulcers healed, and the carnosity resolv'd; but the entrance into the Prepuce continuing narrow, I

passed in a pair of probe scissors as high over the *glans* as the narrow entrance would admit; then pulling back the exterior tunicle I cut the inner straitened coat, till I had so enlarged it that it turned back. That done, I applied my Restrictives upon the wound and rouled them on, leaving the *glans* only covered with the circumvolutions of the rowler. The third day after I dressed it again, and saw the wound digesting and healed in some parts, I dressed it with the *digest. ex. terebinth. cum vitello ovi*, and applied a folded linen dipt in *albumine ovi* over it, and rowled it as before. I afterwards cured the wound with *unguent. tutia*, and then permitted the prepuce to return to its place. In this case I have sometime made two or three stitches at equal distance by which the lips have been sooner united. In those where the prepuce is not retained back, the wound cureth and leaves the prepuce deformed and troublesome incoition, upon which account I circumcised one lately that came out of other hands. You ought to be careful in the dressing ulcerations between the *glans* and prepuce; for it sometimes happeneth, that they grow together, yea, in such cases the very entrance into the *Urethra* will contract extream narrow, and sometimes close up.

11. Observation.

A poor Gentleman supposing his difficulty in urining proceeded from the Stone, silently endured it till the urine was in a manner suppressed: then I was fetcht, and saw the prepuce stretched over the *glans*, and the entrance into it carnous, and scarce wide enough to admit of a probe. I made a dilatation by a small pair of Pliers, then passed in a probe, but could neither get into the *Urethra*, nor pass considerably between the *glans* and prepuce. The work required dispatch, therefore having drawn out the interior tunicle, and thrust backward the external one, I caused my Servant to make a Ligature upon the prepuce close by the end of the *glans*, & with a knife cut off the hard carnous end of the prepuce. I thought to have turned it back, but found the interior coat of the prepuce firmly grown to the *glans* round, as if it had been one body, and the entrance into the *Urethra* almost quite closed up by a hard *cicatrix*. I brought the incised lips of the coats of the prepuce together, and retained them so round by a few stitches; then having wiped away the blood with a sponge, I made an apertion through the *cicatrix*, enlarging the entrance of the *Urethra*, and gave way for his urine; then put in a piece of a searching Candle to keep the passage open. I dressed up the prepuce with *pul. Galeni* upon pledgets of lint dipt in *albumine ovi*, and brought a fold of linen over it, leaving a passage for Urine. That afternoon I took out the wax-candle, and put in a leaden pipe, which was easily retained for discharge of urine, and the while cicatrized the apertion there. The wound in the prepuce being digested and cicatrizing, I cut out the stitches. This Person pissed out seventeen pibles in few days after. Infants are sometimes born without this apertion, in which case if it be not speedily made, the urine makes its way through some part of the *ductus*, or the Infant dieth miserably.

12. Observation of
Chancre
& Glands
in both
Groins.

A young Blade was commended out of the Country to a Physician here, who committed him to my Care. The prepuce was swelled and inflam'd, between it and the *glans* there were many Chancres, as I supposed by the hardness I felt, and by the discharge of fetid matter, and from thence I judged the inflammation and swelling in the prepuce to arise. The Glandules in both his Groins were swelled. To have waited for suppuration in these had certainly caused the putrefaction of the other diseased part, it being then in great danger through the so long concealing of it. Wherefore I began with fomenting and syringing of it with the *decoct. plantag. summitat. rubi*, &c. with an addition of *℞. Egyptiac.* to six ounces of the decoction, and continued the dressing of him with that twice a day. The Physician prescribed him a Clyster that night, and

the

the next morning we let him blood in the Arm and purged him the day after with *extract. Rudii & calomel.* and the next day repeated a Clyster. The day after he was purged again with *extract. Rudii & ℥j calomel.* After this manner he was treated from the 16 of August to the 15 of September following, he drinking a *decoct. sarsæ* upon a Sudorifick *Bolus* those mornings he did not purge; and from the third day of his purging he made that decoction his constant drink, unless it was those mornings while he was purging, & then he drank a thin broth. By this method the Glandules in his Groins resolved, and the Chancres cured: the callosity also on the *glans* and end of the prepuce resolved, and became naturally lax as before. Then we kept him strictly to his Diet-drink and sweat him in a wicker-chair with *Antimon. diaphoret. gum. guaiaci,* and a warm draught of his Decoction, and purged him every fourth day with an *infus. senæ,* &c. and so proceeded to the fourth of October. Those days he sweat he dined upon a roasted Partridge, and at night was allowed Bisket and Raisins of the Sun; and when he purged he dined upon boiled meat and drank small Ale. During the whole course he kept his Chamber, and by so doing was perfectly cured without making his Chaps sore in the least.

A young Woman was put into my hands having a great inflammation and swelling in *pudendo*, with a large round Chancre between the *ductus urinarius*, and the interiors of the *vagina uteri*, with great excoriation of the parts without. I let her blood, and the next day purged her with an *infus. senæ* in a *decoct. cassiæ* and *tamarind.* with *syr. de sp. cervina,* &c. and sent her the while a pint of the *decoct. plantag. summitar,* &c. to stupe and syringe the diseased part, which we continued the use of it till she was cured. The day after her purging I gave her 12 grains of *turbith min.* which vomited her often, and purged her thrice. That afternoon a Clyster of Milk and Sugar was administered, and the next day she took another Clyster. The Flux continuing on the parts, I gave her gr. viij. *turb. min.* with *conf. ros. rub.* in the form of a Pill, it vomited her more moderately. A Clyster was again administered that evening. The next morning I found her more easie I then purged her with the former *infus. senæ* the two following days, by which I prevented the swelling of her Chaps. During this the excoriation dried, and the Chancre was disposed to Cure. From that time I purged her with the Extract set down in the method of Cure, adding to each dose ℥j more or less of *præcipitat. albus* by which method she was cured in few days. I then put her into a strict course of Diet and Sweating, and thereby confirmed the Cure. I shall forbear giving many instances of this Sex, in consideration that there is little difference in the Cure, only these are more subject to fluxion, and so require more powerful revulsion, and that your Topicks be more drying, lest excrescences arise upon the excoriated parts.

A Man aged about 38 years, of a Plethorick body, came to me with the prepuce contracted close over the *glans*, it was carnosous and hard, especially on the right side, under which part I supposed there lay a Chancre. I concluded it venereal, but he not acknowledging it, I prescribed him *pil. coch. min.* 3j *calomel.* ℥j. to take at twice intermitting a day between, but let him blood in the Arm first. The foresaid Pills working agreeably with him, he was supplied with more of them, and drank a *decoct. sarsæ* between while, and took his desired liberty of walking abroad. By this method he sensibly perceived the callosity resolve, and was satisfied that I could cure him if he pleased, but was thereby rendered the more secure, and careless in taking that prescribed Physick; so that after the space of three weeks, when he came to me again he had many scabs on his head, *herpes* on his face, and other sort about his thighs and arms, and the callosity not much lessened on the *penis*. At sight whereof I prevailed with him to let me know his Lodging, which being at last granted, I

13. Observation of Inflammation and Chancre in *pudendo*.

14. Observation of Chancre, with carnososity of the prepuce.

sent him 12 gr. *Turbith min.* and purged it off that Afternoon with a draught of *Sir Alex. Fraiser's Potus amarus.* I repeated the *Turbith* once in three days, and gave him the bitter decoction between. Thus I dryed the Ulcers, and they shell'd soon off: The callosity also resolved easily, and the prepuce relaxed and turned back: yet some *Callus* remained a longer time upon the inner tunicle, of the prepuce; but by Diet-drink, Sudorificks and repeating the Vomit or Purgative Pill once in four days, he was in six weeks perfectly cured.

15. Obser-
vation of
Callosity.

Now lest you may think I am too strict in giving so many Internals in the Cure of so small an Ulcer as a Chancre, or rather a Chancrous *Callus*. I shall give you one instance, and the only one that I ever failed in the Cure of. It was in the year 1654. an Apothecary, since deceased, engaged a Physician and my self in the Cure. The Chancre was of the bigness of a cherry-stone seated on the neck of the *glans*; the Physician prescribed *Pil. Rudii & mer. dul.* to be given every other day, and a decoct. *sarsae*, &c. as it is usually made with its additional ingredients. Those Mornings he did not purge, he was to take ʒi *Antimon. diaphoret. in cocbl. 1. syr. limon.* He having thus prescribed a method of Cure, the Apothecary prosecuted the course, and indeed there was little for me to do; but the Patient desiring my dayly attendance, I dressed him with a pledget dipt in *lac sublimat.* a medicament not inferiour to any in such a case. The first 14 days we passed on very secure, not doubting success, but from that time observing the *Callus* not to resolve as I expected, I began to enquire into the Patients manner of Diet, and into the Physick he took. As to his Diet, he lodged in the Apothecary's house, who kept a good Table, his drink was decoct. *sarsae*, but so small, as it was little better than water. But to that I was answered, it was the second decoction. I then enquired for the first, which he shewed me in a four ounce glass in the window, and told me the Patient drank three of those in a day *tribus horis medic.* I was surpris'd at this new way. and did not wonder at my small success. I thought it not reasonable to take Notice of it to the Patient, but spake to the Apothecary to forbear giving the second decoction, and to make the first proportionably, as it was by the Physician prescribed, and to repeat the Purgative oftner. In this latter I prevailed, but the former he justified, and continued that method to the last. By the frequent purging, and the application of a Cerote made with the solution of crude Mercury in *aq. fortis*, that *Callus* Chancre resolved after we had spent near six weeks time. I then put the Patient upon sweating, and advised a more strict diet, but before the Patient had spent full out a fortnight, he grew weary of the course, and concluding himself well, broke off: but he relapsed soon after; whereas if he had been briskly purged and afterwards kept to a strict Diet, and a strong decoction of *Sarsa*, and sweat, he might have been perfectly cured in a month without any application to the Callosity.

In strong Constitutions the Malignity of this Disease is sometimes discharged by a *Bubo* in the Groin, in which case it ought to be drawn outward by Cupping glasses, and brought to Suppuration. Yet where it is not very forward (and is accompanied with Chancres, or other virulent Ulcers, as in one of the preceeding observations,) I do not attend its suppuration, but proceed in the Cure with Antivenereals, as I have here shewed you: but where there is only a *Bubo*, I proceed as followeth.

16. Obser-
vation of a
Bubo.

One about 40 years of Age, of a strong sanguine complexion, came to me with a swelled Glandule in his right Groin; it was of the bigness of an Almond in its shell, somewhat painful, but without heat. I supposing it Venereal, applyed a Cupping-glass to it, and afterwards an Emplaster of *Pic. Burgund. saponis nigr. axungiae porcinae, & aceti an. part. equal.* granted the Patient liberty of Diet, by which, within three or four days the tumour fixed and grew bigger,

bigger, and heated the skin, and by the continuance of that application, it increased with inflammation and much pain. I then applied this suppurative Cataplasm. *Re rad. lilior. albor. cepar. sub ciner. coctar. an. ℥iv. far. tritic. ℥ij. axung. porci, anseris an. ℥i℥. croci pulver. ℥j.* The Tumour encreasing and not growing soft, I added to the same Cataplasm *ferment. vet. ℥j. pulpæ ficuum extract in sp. vini*, by which it afterwards suppured. I opened it in the declining part by incision, and discharged a slimy crude matter. I dressed it with *unguent. basilic.* upon a Tent, and afterwards added *merc. præcipitat.* Whilst I deterged the Ulcer I let him bleed, and purged him with an *infus. senæ* 3 or 4 days; but after the first days purging, I gave him *℥j. calomel.* over night, and the infusion the following morning. During the time it was cicatrizing, I purged him with *pil. coch. min. & calomel.* every third day. The other days he drank a *decoct. sarsæ*; and after the Ulcer was cicatrized, I gave him a few sweats, and concluded the Cure.

A young Man came to me having a *Bubo* in his right Groin. I applied an Emplaster of *Galbanum* spread upon leather, and continued it there some days, giving him the liberty of Diet. In a short time it suppured. I opened it by Caustick, and discharged a slimy matter. I dressed it up with Lenients to hasten separation of the *Eschar*, and applied an Emplaster *de mucilag.* with *empl. melilot.* After the *Eschar* digested off, I deterged with *mand. Paracels.* purged him with *extract. Rudii & calomel.* every other day, and prescribed a *decoct. sarsæ, lig. guaiaci, &c.* which he drank those intermitting days. After the Ulcer was cicatrized I sweat him, keeping him that while to a stricter diet, by which method he was secured from relapsing.

A Man about 34 years old, of a full body, came to London, and lodged himself and Wife in the house of his Physician, he being indisposed with an inflammation on his belly to the left Groin, pretending he had over-heated his body by disorder in drinking. He was advised to keep his bed, and dispose himself to a breathing sweat. After a day or two he complained more of his pain, upon which account I visited him, and saw the inflammation discussed on his belly, but there remained a tumour in his Groin near suppured. A Cataplasm was applied to it *ex rad. lilior. &c.* by which it suppured a few days after, and I opened it by a Caustick, and gave vent to a crude sanious matter. Whilst I attended the digestion of this, the Patient took an opportunity to shew me some small Chancres upon the *penis* near the *Frænum*. I dressed them, and gave him a solution of *mel. Egyptiac. in decoct. plantag. &c.* to cure them.

The abscess not digesting nor yielding to deterfives, I acquainted the Physician that I had discovered the disease Venereal, & implored his help. He purged the Patient with *pil. Rudii, mer. dul.* and prescribed him *decoct. sarsæ, &c.* by which the Ulcers *in pene* were cured, and the abscess grew well disposed to heal. But upon the Physicians and my discoursing with the Patient of his Disease he grew passionate, and denied it to be Venereal; and a day or two after removed out of his lodgings two or three miles into the Country and to avoid the Discovery of his Disease, he dismissed me, and entertained another Chirurgeon; who complied, and promised in few days to cure him without the help of internal Remedies: But after all his endeavours another Chirurgeon was consulted, by whose advise the Patient was put into a course of Antivenereals at last, and cured of that, but grew otherwise Diseased, and lived not many years.

A young Man was brought to my house, of a Plethorick body, Diseased with a hard compacted swelling in his left Groin; it was a *Bubo*, and like to suppurate, I applied an *empl. diachyl. cum gummi.* About a week or ten days after he came to me again, it was then suppured; I opened it, and having discharged the matter, dressed it with *unguent. Basilic.* upon a tent, and applied over it

17. Observation of a *Bubo.*

18. Observation of a *Bubo.*

19. Observation of a *Bubo.*

some

some of the aforesaid Plaister, and dismissed him and his Apothecary with directions how to proceed. After two months I was fetched to this Patient, and saw that *Bubo* terminated in a Phagedenous Ulcer about three inches in length and proportionably broad with indented callous lips. The Ulcer it self was fordid, and had corroded round under those lips; he had also on the *scrotum* four large round Ulcers and others like them in *perinæo*. It was my wonder to see this Disease so rage, considering the course I had prescribed was the same I had cured so many by: and he had taken so much *merc. dul.* that it was grown familiar to him, and seemed to encrease the virulency in the Ulcers. I began the work with cutting off the jagged Lips, and filled the Ulcer with pledgets spread with *unguent. basilic.* dipt in precipitate, and dressed the other Ulcers after the same manner with *empl. diachalcirh.* to retain them on. I did not let him bleed because I had permitted those callous lips to bleed freely, but I directed a Clyster to be administered that afternoon. I purged him the next day and two or three after with a *decoct. a mar.* of *Sir Alex. Frasers*, and then gave him *gr. xvj. Turbith mineral.* in a Pill made up with *conf. ros. rub.* which vomited him well and purged him twice. That afternoon a Clyster was given him of fat broth *cum vitello ovi.* After the first application of *merc. præcipitat.* I dressed the Ulcer in *inguine* with *unguent. basilic.* and *merc. præcipitat.* mixed. The other I dressed with pledgets pressed out of *lac sublimat.* By the repeating of the *Turbith min.* once in four or five days, I disposed the Ulcers to heal, and by Clysters and purging draughts between while I prevented salivating.

After the Ulcers in the *scrotum* and *perinæum* were cicatrized, I put him into a strict Diet and kept him to the drinking of *decoct. sarsæ*, &c. with good sudorificks, and by purging him once in four days he was happily cured and continueth so to this day.

20. Obser-
vation of
Bubones,
Chancres
and pains
in the
shoulders.

Two young Lads, intimate companions, came out of the Country alike clapt by one and the same wench; they having both failed of their Cure there, were commended to my care. They had both swellings in their left Groins and callosities about the *glans* remaining from preceeding Chancres. They were also afflicted with *verruca* and *mariscæ* in *podice* and pains in their Shoulders. These swellings in their Groins were without pain or inflammation so not like to come to suppuration. Therefore without more ado I let them both blood & purged them two or three days with *Sir Alex. Fraser's Potus amarus*, then gave them each a dose of *Turbith mineral.* which vomited them well, and took off their pains. The next day I snipt off the *mariscæ* and *verruca*, rubbing their remaining roots with the caustick Stone; and having cleansed them, I dressed them up with Lenients, and after separation of the Eschars cicatrized them with the Vitriol Stone and *unguent. epulotic.* During the Cure of these I repeated the *Turbith min.* once in four or five days, and between while carried down the matter by Clysters and Lenient purgatives, by which method I resolved the callosities and the glands. Then I put them into a *decoct. sarsæ* with sudorificks, and with *extract. Rudii* and *calomel.* every fourth day finished their Cure.

21. Obser-
vation of
heat, pu-
stules, &c.

A Physician and my self were fetched to a man whom we found in bed. He was not sick, but broken out all over his body with heat. The Physician advised him to dispose himself to a breathing Sweat upon a draught of warm Posset-drink, wherein was boiled *raf. C. C.* &c. A Cordial Julep was also prescribed as is usual in ebullition of the *serum sanguinis*. Three or four days after I visited him again, and found that heat raised into many pustules, which had also overspread his head, and terminated there in as many ulcerous scabs amongst his hair. These were visible symptoms of the *Lues*, and appeared so to me at the second visit I made him; but he did not acknowledge it till some few

few days after, and then he shewed me some corrosive Ulcers on the *penis* near the *frænum*, and some *verrucae* in *perinaeo*, yet denied that it was an infection of a late date. He was contented we should proceed in the Cure, to which purpose he was let blood and the next day purged with an infused Potion. After which he purged him with *calomel*, &c. proportionably as his strength would bear, avoiding the making his chaps sore. By this method the Ulcers dried and the Scabs shell'd off, the Ulcers on the *penis* were dressed and cured as hath been shewed in the preceding Chapters. We then prescribed him *decoct. sarsæ* &c. with *antimon. diaphoret. bezoard. min.* &c. and some few days he sweat; but he supposing himself cured, brake off from our method: whence it came to pass that the malignity afterwards shewed it self in different forms. Sometimes in an *ophthalmia* threatening his eye sight, in which case he consulted oculists and others, but after all was cured by us with the formentioned purgations. After that he was afflicted with a fierce Catarrh, in the cure of which he ran long courses of pectorals, but was only relieved by us with Antivenereals. But not prosecuting that method of Cure, he was some months after grieved with a Colick which lasted a long time, and a *hernia humoralis* attended that: upon which consideration he at last submitted to a more strict method, and was freed of his Colicks and other symptoms by purging with Catharticks, mixt with *Calomel*. The course was finished with *decoct. sarsæ*, drying diet and sweating.

A Woman aged 27 years being quick with Child was broken out in her head and face and several parts of her body with *serpigo* and various *pustulae* and scabs. I let her blood, and the next day purged her with an infusion of *senæ*, *rhab.* &c. to which was added *manna* and *syr. ros. solut.* and from that time I prescribed her *præcipitat. albus* from 15 gr. to 25 every other night, or proportionably, to avoid salivating of her. But I not having the liberty of visiting her as I ought, it swelled her chaps and she fluxed 18 or 20 days, and was thereby freed of her *pustulae*, &c. In the declination of the Flux I purged her with a *decoct. senæ, polypodii, hermodact. sem. carthami*, &c. made in a quantity of Diet-drink, which she drank thrice a day, and took the while a medicated broth for her nourishment. After her chaps were cured I put her into a *decoct. sarsæ* and a drying diet, & sweat her moderately with *antimon. diaphoret. gum. guaiaci* and *bezoard. occident. cum conf. melissæ*, and *syr. limon. in forma boli*, purging her between while with the forementioned apozeme, and cured her. She afterwards went out her full time, and was delivered of a sound Child: I made it a fontinel in the neck. It dyed of Convulsions in the Country at three quarters of a year old.

A Woman big with Child having many ulcerous scabs on her head and other parts of her body with great erosion, I let her blood and prescribed her a *decoct. sarsæ* with some of the milder purgatives *senæ, polypod. hermodact. rhab.* &c. and afterwards prescribed her a few doses, viz. $\mathfrak{ss}$. *calomel.* every other night till I had checked the malignity; then prescribed her this: $\mathfrak{ss}$. *gum. guaiaci* g. xv. *antimon. diaphoret.* gr. viij. *conf. borag.* q. s. *f. bolus.* After which she drank a draught of *decoct. sarsæ*, and sweat moderately. By this way of proceeding her disease was palliated, and she went out her full time, and was brought to bed; but the Child dyed convulsive within three weeks. After which the Mother was removed to more convenient lodgings, and cured as hath been said in the former Observation.

A Nurse by giving suck to a diseased Child was infected with great ulceration and chops with *verrucae* on the Nipples and parts about the Breasts, upon which account the Child was taken from her, it being suspected she had infected the Child. She had also a node upon her right hand and some breakings out

22. Observation of a Woman with Child venereal.

23. Observation of another Woman with Child

24. Observation of a Nurse infected.

out upon her Limbs. I enquiring into the cause saw this poor Woman's Child which was born within the year very well complexioned and sound. I caused her to be let blood, and purg'd her with *pil. coctia & merc. dul.* three or four times, intermitting a day or two between; then Vomited her with *Turbith mineral* and repeated it once in four or five days. To the Ulcers and Ulcerations I only apply'd a little *unguent. diapompholig.* spread thin upon Linen to prevent their fretting and sticking to her Shift, for they cured by the Internal Remedies. But the Nodes not resolving I raised a Salivation by the *Turb. min.* and afterwards confirm'd the Cure by purging, dry Diet, *decoct. sarsæ, lig. guaiaci, &c.* with Sudorificks.

25. Observation of an Infant.

I was sent for to a Child that was broke out all over the Body with some branny and mattery scabs, the disturbance whereof had extreemly emaciated the Infant. The Mother was also diseased in the same manner, and big with Child; I prescribed her a purging Apozeme, and gave her *præcipitatus albus* every other night the first week, and afterwards prescribed her a medicated Ale with *sarsæ china, lig. guaiaci, &c.* for her constant drink, and gave her many days *Æthiops mineral.* ʒj. at a time, and kept her body soluble between while with a lenitive Bolus.

I purged the Infant with *syr. de Rhab.* and afterwards with *calomel.* from gr. iv. to gr. vj. either in the pap of a roasted Apple, or a spoonful of Milk proportionably as I saw he could bear it, it purged him twice or thrice, and sometime vomited him. His grewel and pap were made with a decoction of *sarsæ china, &c.* by these Remedies I dried the mattery Scabs, and the Infant was in a great degree freed of his Itch. I also caused him to be bathed in a tub of warm water seven or eight days. In the declining of his Itch a *Phyma* arose near the *podex*, which being suppurated I opened by a Caustick, and ordered the dressing of it daily with *unguent. basilic.* spread upon linen. This discharged matter plentifully for the space of a month, and then it lessened and cured. During this method of Cure, the Infant grew and recovered strength; but upon the omission of the Mercurials new eruptions appeared, which were removed by *Æthiops mineral.* and moderate purging, but it died since. His Mother by continuing the prescribed method was Cured, and was in due time brought to bed of a healthful Child, and both the Mother and Child continue well to this day.

26. Observation.

A Woman who suspected her self Venereal was brought to bed of a seeming healthful Child; it thrived very well for some months, and the skin was clear, yet it had a fontanel made in the Neck for a caution. This Infant being about four months old brake out in the Head, afterwards in the Face, and most parts of the Body with such eruptions as shewed it to be Venereal, yet the Mother seemed untainted. I proceeded with this Infant by purging it with the infusion of *Rhabarb.* and between while with *præcipitat. albus*, which sometime vomited him, and gave him a stool or two. I relieved him much, and disposed the scabs to dry. I prescribed him medicated grewels, and a *decoct. sarsæ, ras. C. C. eboræ, &c.* for his drink; also *Bezoard. miner.* to take sometime by which he recovered of his Distemper, but died afterwards of the Small Pox.

By the same method I cured a Girl of two years old, that was broken out of her Body with *Pustulæ* and mattery Scabs, and had a *marisca juxta podicem*, which I have always observed to be a certain Symptom of the *Lues*.

27. Observation of a Herpes exedens in the Face.

One newly come out of a course of Physick, shewed me a small dry Scab on one side of his Neck, and enquired of me whether I thought he was Cured. I returned a favourable answer, not being willing to engage in the Cure of a Disease which he supposed himself so well of, but gave him a little *Pomatum* to dress that Scab. Some while after some Symptoms arising, he put himself in-

to

to other hands; who treated him for the space of 8 weeks, and dismissed him cured; and upon that assurance he married: but within few days a new *pustula* thrust out and ulcerated. He writ to me to send him somewhat to palliate it till he should be at more liberty to put himself into a course of Physick. I sent him a Box of *pil. Rudii* with *calomel.* and an unguent to dress the Ulcer, but he not taking the Pills, the Ulcer terminated in a *herpes exedens*, and at last he sent for me. He had a callosity on one side of the *glans* as big as a small Kidney Bean, he had also some small round-corrosive Ulcers about the *frænum*, and was troubled with a noise in his ears and deafness. I undertook his Cure and began with a Clyster, then let him blood, and purged him the day after with an *infus. senæ*, &c. the next morning I gave him 25 grains of *præcipitat. alb.* in a *Bolus* with *conf. boraginis*, and that afternoon a Clyster: to the Ulcers and callosity in *glande* I only applyed pledgits dipt in a solution of *mel Ægyptiacum* in some of the *decoct. plantag. equiseti*, &c. The *herpes exedens* lay round and hard in the skin and was crusted over with a thick scab, which I loosened by bathing it with a *decoct. malvæ*, &c. The Scab being taken off, the Ulcer appeared sordid and corroded round, and the Lips were high and callous. When these happen in the Thighs or other parts which are not so visible, I do not concern my self in the dressing them otherwise than to defend them from adhering to their Linen, till they be dried by internals: but in this place I was obliged to remove the callous lips and the several excrescences in the Ulcer to render the cicatrix smooth. To which purpose I rub'd them with the Caustick stone, and wasted and dried the *hyperfarcosis* by the application of red precipitate, and afterwards by the use of the Vitriol-stone and Epuloticks I cicatrized the Ulcer so even, as at this present there are no marks of it. During the work I purged him often with *præcipitat. alb.* & *pil. coch. min.* and sometimes vomited him with *turbith. mineral.* by which I also resolved the callosity and cured those little Ulcers near the *frænum*. After I had thus freed him of those maladies which affected the skin, I put him into a *decoct. farsæ*, &c. with the observance of a strict Diet, and sweat him often with a *Mercurius diaphoret.* and purged him once in 4 or 5 days, by which he was also freed of that *tinnitus aurium*, and restored to a perfect Health.

A Man aged about 40 Years, of a gross body and disorderly life, frequently consulting men of our profession, but never observing any strict method of cure came one day to advise with me about his Disease, which was a dry scurf with an itch on several parts of his Body, as also some wandering pains on the *scapula*, &c. Amongst other Discourse he told me an eminent Man in the Cure of the *Lues venerea* had offered to cure him by sweetning of his Blood. The method he proposed thereto was by purging, bleeding and sweating, without giving one grain of *Mercury*. I did not believe his Blood would be the better, yet if he thought so he might proceed in that Course, and when he should be let blood I desired he would send for me. He did so, and I let him blood according to the Direction ten ounces. It was of good colour and consistence. About six weeks after when he had finished his course of Physick, he sent to me again. I let him blood about the same quantity as before. His Blood was like some of that our Physicians call pleuritical, it had neither colour nor consistence; yet I thought not the worse of it (so he was cured) for upon a return to his wonted Diet the Blood would recover its former colour: but he relapsed some weeks after, and I let him blood again, and it was as at first of good colour and consistence. He was well pleased to see his Blood look better, but was so much dissatisfied with his late Treatment that he would not be persuaded again into a strict course of Physick, yet I undertook the Cure, and purged him frequently with *pil. è duobus* and *calomel.* and sometimes gave him the

28. Observation of sweetning the Blood.

latter alone: he also drank a Decoction of *sarsæ*, &c. but with these he went abroad and thereby prolonged his Cure, yet at last that Malignity was also spent.

29. Obser.
of Herpes,
Ulcer in
his tongue
and vari-
ous pains.

A Man of about 30 Years of age having several *Herpes* and serpigenous Ulcers on his Thighs and about his Body, with nocturnal pains in his Head and other parts, also a large Ulcer on the middle of his Tongue, I let him bleed, and the next day purged him with the bitter drink. The morning after I gave him a Dose of *Turbith min* and the third day after repeated it again, designing to salivate him; upon which account I repeated the *Turbith* five times. He had taken much *Mercury* and only flavered with it, but the while he was freed of all the symptoms save that of his Tongue, and that seemed inclinable to heal. Therefore I purged off the *Mercury* with the bitter Decoction for several days, till I had run him very low. Then I put him in a strict course of Diet with decoct. *sarsæ*, &c. sweating and purging him the space of sixteen days, during which the Ulcer in his Tongue Cured. I designed bathing and a more nourishing Diet, but his Affairs abroad hastned him away. He was longer in recruiting his Flesh than was usual; but by a Milk Diet he recovered it, and hath from that time continued well.

30. Obser.
of Ulcers
on the U
vula, ton-
sils and
nose.

A Country Lad was taken notice of by some of his Fellow-servants in the house where he lived, to have a fore nose; he told them it was scratcht in playing with a Kitten; but in progress of time the Inflammation and Swelling increasing very much, he was brought to me one afternoon, while I was diverting my self, thus. I hearing them say it was occasioned by a scratch, did not much mind it; but so soon as I heard him speak I took notice of his hoarseness, and took him to the window, where looking into his mouth I saw the tonsils Ulcerated and the *uvula* black with the mortification and part of it separating. His Nose was also stuffed with crusty Ulcers. I questioned him privately how long it was since he had a Gonorrhœa or Chancre, and who cured them. He confidently denied he ever had any, however the *Lues* was visible, and required a speedy remedy. He was presently let blood, and I gave him two papers of *mer. dul.* ʒi. in a paper, with directions to take the one at night in a spoonful of Bread and Milk, and the other in the morning, and two hours after to Drink Posset-drink with an ounce and half of *Manna* dissolved in it. I directed the dressing of the *uvula* and those Ulcers of the tonsils with *aqua divina Fernelii* daily, till my internal Prescriptions disposed them to a healing condition. To which purpose I repeated the *merc. dul.* with some of the purgatives between while, and in the space of ten days cured those Ulcers in his throat. His Nose was syringed with decoct. *hordei*, by which the crusty Matter which stoppt his Nostrils was removed. Then we syringed with some of the *Errhina* set down in the method of Cure. After the Ulcers in his throat were digested, I hastned the exfoliations of the Bones in his Nose by the giving him 2 or 3 Doses of *Turbith*, which made a light Salivation. Towards the declination of it I purged him with the bitter Decoction, and by Diet-drink, strict Diet, Sweating, &c. finished his Cure.

Coming one day to put him out of his course of Physick, I saw the edges of one of his Nostrils fore which I supposed a new Eruption: it surpris'd me to see it so soon break out again. I was angry with the Nurse, suspecting there had been some neglect in the prosecution of his course of Physick; but the Nurse reply'd, he had made his Nose sore by picking of it. For a farther tryal I advis'd the Patient to forbear so doing, and to keep his chamber a while longer; he did so, and 2 or 3 days after I visited him again, and saw the Nostril well, and was satisfied that he had picked it. I advis'd him to be more careful of his Health, and dismiss'd him.

One of about 20 years of Age came to me with his Head over-spread with crusty ulcers; also some serpiginous ulcers about his Body, and a Node upon the back of his hand, with a gumminess on the tendons reaching to his fingers, insomuch as he could not bend one of them. In endeavouring his Cure, heretofore he had run long courses of Physick, and was much emaciated thereby. I began with the fomenting and embrocating his hand with discutients, and applied the mercurial *Empl.* set down in the method of Cure, and purged him with *diagridium*, *bezoard. minerale*, *calomel. in conf. ros. damasc.* and the night after gave him an Opiat *Bolus* with gr. j. *Laudan.* Thus I proceeded according as his strength would admit, and prescribed him *decoct. sarsæ*, and medicated Broths, by which I dried and shell'd the ulcerous Scabs, and eased his Pains. After I found his strength recovered, I gave him *Turbith.* gr. x. and observing that he bore it well, I repeated it a second and third time, and thereby salivated him about 17 or 18 days: all which time I nourished him with the afore-said Broths and Posser. During the Salivation the Gumminess resolved, and the Node diminished much. As the Salivation declined, I again prescribed him the *decoct. sarsæ*, and purged him with the bitter Apozeme; then by a strict Diet, Sweating and Purging, the Node resolved, and his hand was restored to its former state, and I dismissed him perfectly cured.

31. Obser.
of *Pustule*
and a Node
on the
back of
the hand.

One of about 40 years of Age, having a *Herpes exedens* on his Right-brow, a *marisca* in *podice*, and some *verrucae* about the *glans*; also some wandering pains on his Shoulders; I let him blood, and purged him with the Cathartick Eleotuary, and *mer. dul.* three or four days, and dressed the *Herpes*, as hath been shewed in some of the preceding Cases. After this purging I cut off the *marisca* close with a pair of Scissors, and rubb'd the remaining Root with a Caustick stone, then dress'd it up with Lenients, by which it was digested, and afterwards cicatrized it by the help of the Vitriol stone, and the common Epuloticks. Whilst this was thus digesting I vomited him with *Turb. min.* repeating it once in 3 days, and increased the Dose from 12 to 18 gr. till I had dried the *Herpes*, and the crust shell'd off. During this, I cut and burn'd off the *Verrucae*, as hath been said in the like cases. These being also cured, I purged him with the bitter *decoct.* 4 or 5 days, then with *decoct. sarsæ*, and that Sudorifick of *Bezoard. min. gum. guaiaci*, &c. I sweat him, and kept him to a strict Diet, purging him once in 3 or 4 days. His Pains remitted after his taking the first Dose of *Turbith*, and by this latter course his Cure was confirmed.

32. Obser.
of a *Herpes*
exedens,
verrucae,
&c.

A Nurse was brought to me, who, by giving suck to a diseased Infant, had the Nipple and Parts about of her Right-breast, very much excoriated, & four round, hard, crusty ulcers somewhat more distant. She had a Node with Pains on her Right-leg, also a *Serpigo* on her Right-hand and Fingers. She had not been troubled with a *Gonorrhæa*, nor was the *Pudendum* ever diseased, which confirmed to me that she had gotten the infection by suckling the Child. I began her Cure with letting blood, and purged her with the purging extract and *calomel.* and after I had repeated it 3 or 4 times, and given her some *calomel.* alone at distant times, I vomited her with *Turbith min.* and repeated it 3 days after, and thereby her Chaps swelled, and she salivated 18 or 20 days: during which, Clysters of Milk with the yolk of an Egg, were often administred, and her mouth frequently washed with *decoct. bordei.* &c. Before she had salivated six days, her Node and pains removed. As the Salivation declined, she was purged with the bitter *decoct.* and her Cure was finished by *decoct. sarsæ*, &c. as hath been shewed in the former Observations.

33. Obser.
of *Herpes*
in the
breast, &c.

A Man about 30 years of Age, of a full Body, diseased with mattery Scabs about his Head, many *pustulae* and serpiginous Ulcers on his Thighs, and several parts of his Body, put himself into my hands. I let him blood, and

34. Obser.
of *Herpes*,
&c.

that afternoon I prescribed him a Clyster, and the morning after purged him with *pulv. Cornichin.* and the next morning early he took *præcipit. alb. gr. xxv.* and a Clyster that afternoon. The day after I purged him with *pulv. Cornich.* *℞. præcipit. albi ℞.* and the next two mornings gave him *Æthiop. mineral. ℞.* in a *Bolus* with *cart. conf. citri*, and a Draught of *decoct. sarsæ, &c.* after it to dispose him to a breathing Sweat. The third day I gave him *Turbith min. gr. xv.* which vomited him often, and purged him twice, and in the afternoon griped him, and put him upon a *Tenesmus*; to remedy which a Clyster of Milk *cum vitello ovi* & *ol. chamæmel.* was administred, and Chicken-broth and warm Posser-drink was his Drink that day and the next. The day following I gave *præcipitati albi ℞. & Turbith. mineral. gr. vj.* in a *Bolus*, which vomited him thrice. That afternoon a Clyster was repeated, and the day after he was purged with an infused Potion of *sena, rhubarb, &c.* and repeated the *Æthiops mineralis* and *decoct. sarsæ*, as before, three mornings together. Then I gave him *Turbith gr. xv.* as at first, which vomited him often, and from that time the Ulcers dried, and in the worst of them the Scabs were ready to shell off. I then purged him with the bitter Decoction 4 or 5 days, and kept him strictly to the *decoct. sarsæ*, drying Diet and Sweating, with *Æthiops mineral.* and purged him once in four days with *pulv. Cornichini*, and *præcipit. alb.* and so concluded his Cure in 7 Weeks.

35. Obser.
of Herpes
and serpig.
Ulcers.

A young Fellow sorely Diseased with *Herpes* and fretting Ulcers from his Right-hip and buttock down that thigh, having used many remedies externally and internally, I applied a Cloth spread with *unguent. enulat.* over the ulcerous parts to defend them from sticking to his shirt, and let him bleed that day, and purged him the next with an *infus. sen, &c.* & the day after gave him *Turb. mineral, gr. xj.* The day after I purged him with *pulv. Cornichin.* and *præcipit. alb.* and repeated it every other day, by which the Ulcers soon dried, and the Scabs shelled off. His Skin growing smooth, he concluded himself cured and left me, but in less than a Month he relapsed and came to me again. I repeated bleeding, and purged him with an infusion of *sena, &c.* and afterwards gave him 3 or 4 Doses of *Turbith mineral.* it made his Chaps a little sore, and somewhat he flavered. This freed him of his serpiginous Ulcers. Then I purged him with the bitter Decoction, and sweat him with *decoct. sarsæ, &c.* purging him once in three or four days with Antivenereals, and at last dismissed him Cured.

36. Obser.
of Herpes
exedens.

A Man of a full Body, having been long afflicted with ulcerous Scabs, *Serpigo*, and other foulnesses of the Skin arising sometime in one part of his Body, and sometime in another (his Chirurgion being dead) was recommended to my Care. The Ulcer that then troubled him was on his Chin, the compass of a broad Shilling, and covered with a thick Scab. It seemed to me Venereal, but I was told otherwise and durst not dispute it. I thought my self very unhappy in being put on the Cure of such an Ulcer, without the help of Antivenereals. I fomented it with *decoct. bord. summitat. althææ malvæ, & sem. lini,* and applied a Pledgit of *unguent. rosat.* over it with Bandage to retain it on. The next morning the Scab came off, and there appeared a tordid Ulcer with ragged callous lips round it, also many Excrescences rising up in the middle, which made the Ulcer not unlike a Honey-comb, as I have elsewhere described it. I sprinkled the Ulcer with Red Precipitate, and applied over it small Dossils of dry lint, and some Pledgits spread with *unguent. turia Vig.* over them, and repeated this way of dressing every other day, till I saw the Flesh in those little cells ruddy. Then I dressed them with little Pellets of Lint, and covered the Excrescences with precipitate, and bound up the Ulcer as before, not opening it again till the third day. Thus I wasted them, and the Ulcer cicatrized

trized here and there as they were consumed. I was glad to see it cicatrize any way, and resolved without more delay to remove the callous Lips. To which purpose at the next Dressing I rub'd them with a Caustick stone, and clip'd off the Sloughs, then sprinkled them with precipitate, and after separation of those Sloughs, I rubbed the Lips of the Vitriol stone, and by the one and other I smooth'd the Ulcer, and at last cicatrized it with Pledgits dipt in *Lac Virgin.* but the *cicatrix* appearing unequal, I rubbed the remaining Eminences again with a little Caustick, and left it at last cicatrized more smooth to the Patients satisfaction. I was glad I had preserved my Credit with him. But it being Venereal, I suspected that it would shew it self again in the same place, but it appeared in a Node upon his Skin, as you may read in some of the following Observations.

A Man of about 32 years of age, of a strong Constitution, came to me upon a supposition of having the Kings-evil. His Face was o'er-spread with *Herpes exedens*, some of them crusted high, with Scabs upon his Nostrils and Lips; his Head was covered over as it were with one Scab, and in truth his whole Body so diseased with eating Ulcers, that he could neither sit nor lie without very great pain; his Shirt, Drawers and Stockings being stiff with the matter that flowed from them. Upon enquiry into the original of his Malady, I discovered that he had contracted a *Gonorrhœa* beyond Sea, and had been diseased with *pustulæ*, &c. above half a year. I prescribed him a Clyster that evening, let him bleed the next morning in the Arm about ten ounces, gave him *Calomel. ʒj.* that night going to bed, and purged it off in the morning with an *infus. sen. rhab.* &c. The next morning he took *Turbith. min. gr. xij.* and drank a Draught of Posset-drink after it, which vomited him 3 or 4 times, and purged him much. This poor Man's condition being extream uneasie, obliged me to prosecute the drying up those Ulcers with what expedition I could: wherefore I gave him *Calomel.* and *Turbith* the oftner, and purged it downward with the bitter Drink either the same day or the next, according as his Strength would bear, till I saw the several Ulcers dried, and the Scabs shell'd off. Then I left off the use of the purging Drink, and increased the Dose of *Turbith. min.* till I saw him Salivate; which Salivation lasted about 18 or 20 days. In the Declination thereof, I purged him again with the fore-mention'd Decoction, and finished the Course of Physick with *decoct. sarsæ*, Sudorificks, Sweating and drying Diet, &c. according to my usual method. During which I rubb'd off the several remaining Excreescences (rising from the Ulcers) with Caustick stones, and cicatrized them with the Vitriol stone, *unguent. desiccativ. rub.* &c. and dismissed him Cured.

One came to me having *Herpes exedens* on his Chin, and many eruptions about his Body, with wandring pains on his Shoulders, Arms and Legs. He desired to be cured, but would not be confined to his Chamber. I declining to meddle with him upon those terms, he put himself into the hands of an Empirick whom he had formerly known in *Italy*. He undertook the Cure with great Promises. But after the taking that Empirick's Prescriptions a much longer time than he had undertaken to cure him in, the Symptoms remaining, the Patient grew peevish; and the Empirick to recover his Credit with him alter'd his method, by which it seemed the Ulcers cured. But in the while his Chaps swelled, and in taking cold a *Diarrhœa* with a *Tenesmus* followed, and with much disorder he was brought to a Lodging near me.

I caused him to be put into a warm Bed; and prescribed him a *Bolus sudorifick*, and with a draught of warm Posset put him into a Sweat, and some hours after advised a Milk Clyster *cum vitell. ovor.* &c. to lenifie his Bowels, and laid him to rest with *elect. diascord.* and the next morning I purged him with an *Infusion*

36. Obser.
of *Herpes exedens* o-
ver spread-
ing all the
Body.

37. Obser.
of *Herpes serpigin.*
&c.

fusion of *Jenna*, *rhabarb*, &c. and repeating the opiate, by which the griping of his guts was remitted. But in this while the Swelling in his chaps was sunk, and he complained of a noise and pain in his Ears, and tho his Mouth was very sore, yet did he not spit. I much suspecting how I should cure him without salivating, gave him *arcantum Corallinum* gr. iv. by which he vomited often, and thereby I raised the Swelling in his chaps and he fluxed near 3 weeks. All which time I kept him to warm Posset-drink and Cordials, and administred Clysters as occasion offered them. As the Flux declined I purged him with the bitter decoction, and by a drying Diet, sweating, &c. I cured him.

38. Obser.
of pustule,
Ulcers and
nocturnal
pains.

One aged about 26 years, having breakings out in his Head, Right-brow, and several parts of his Body, with pains in his Shoulders and Legs, I let him blood, and the next day purged him with a cathartick Potion. Then in consideration he had failed of his cure in other hands through his irregularity, I caused the Unction to be applied for some days, but he not salivating well thereby, I gave him ʒß. *Turbith mineral.* and raised it higher, and continued it between 3 Weeks and a Month, during which his Pains ceased, and his Skin became clean. In the declining of the Flux I purged him with the bitter Drink, and put him into Diet Drink, Sweating, &c. and designed to finish his Course by Bathing; but he, supposing this latter Course needless, broke off unknown to me. About 2 months after he was brought to me more Diseased, and upon enquiry into the cause I found he had taken too great a liberty of Eating and Drinking during his Cure. To avoid which Inconvenience now I lodged him in a house where there was a more strict guard of him; then repeated venæsection and purged him again with the bitter Apozeme 7 or 8 days, and gave him *calomel.* every other night during his purging; then prescribed him a Dose of *Turbith min.* gr. xv. and repeated the *Turbith min.* so often as I might conveniently do without fluxing him. After I had thus freed him of all the Symptoms, I put him in a more strict Diet, and by Diet-drink and Sweating him with *gum. guaiaci*, &c. also purging him once in three or four days, I secured him from Relapse, and concluded the Course by Bathing him.

39. Obser.
of an Oph-
thalmia.

A Man aged about 50 years, of a seeming Healthful Constitution, having been long subject to inflammations in his Eyes, had tryed ineffectually the several endeavours of Oculists and others by various *collyria*, purging, bleeding, blistering, shaving the head, fontanels, &c. At length he consulted me, relating to me the manner of his life, and the various remedies he had taken. I suspected the distemper in his Eyes arose from some relict of the *Lues Venerea*; upon which surmise I readily undertook his Cure. I began it with the washing his Eyes with a solution of *troch. albi Rhas. in aq. ros. rubr.* and applied *emplast. ad Herniam* on his Temples. The next day I let him blood and prescribed him a Clyster. The morning after purged him with *pil. Rudii & mer. dul.* and disposed him to rest that following night with an Anodyne Draught. The morning after I gave him *bezoard. min.* gr. xv. *gum. guaiaci* gr. viij. *in. cochl. cum syr. limon.* and a Draught of *decoct. ferfæ, lig. lentis. cum flor. anthos, euphrag.* &c. as is set down in the method of cure, to dispose him to a breathing Sweat, and advised the drinking the foresaid Decoction daily, excepting when he purged, which was every fourth day. By this method his Eyes were cured in the space of ten days, but he prosecuted the method longer.

40. Obser.
of an Oph-
thalmia.

A young Fellow grievously afflicted with an Inflammation of both his Eyes with *pustulæ* & Ulcers in the *tunica cornea* & *adnata*, also Blearedness of the lids, he was returned from the Oculist as incurable; upon which account I was desired by his Friends to employ my endeavours in the taking off the Fluxion, and to dispose his Eyes to some ease, they concluding his sight lost. I let him blood

at

at that instant, and purged him the next day with *infus. senæ*, &c. He was of a strong constitution and seemed to require such evacuation. The evening after his purging I made him a *seton*, and brought a fomentation to give a breathing to the impacted humours, with which I fomented his eyes. I also dropt a collyrie into them of *aq. chelidon. mirabilis*, &c. as it is prescribed in the Treatise *de strumis*. While I was one day dressing his *seton* and eyes, I questioned him whether he ever had a *Gonorrhœa*; he denied it faintly. I urged him further, and looked upon his *penis* and saw a hard *callus*, the Remains of a Chancre. Upon sight of this I purged him with *pul. cornichini* and *merc. dulcis*, and repeated it often, and thereby took off the fluxion, and disposed his Ulcers to cure, and afterwards by *Turbith min.* vomited him once a week. Between while I prescribed him *decoct. sarsæ*, with *bezoard. mineral. gum. guaiaci*, &c. and regulated his Diet accordingly. By this method I cured his Eyes, and he gradually recovered his sight to walk about the streets, and of late Years can Write and Read.

A poor Fellow came to me Diseased with a *fistula lachrymalis*, which at first sight seemed by its callous lips to be cancerated, but being informed that he had heretofore been clapt, I readily undertook his Cure, and began with letting him blood, and purged him with *pil. cochis min.* & *calomel.* During his purging I deterged the Ulcer and disposed it to cure by removing the chancrous lips, and made way to the Bone, which being carious I dried with an actual Cautery, and from that time dressed it as hath been shewn in those observations of *fistula lachrymalis* in the said Chapter *de strumis*, and compleated the Cure by antivenereals as in the preceeding observation hath been prescribed, and dismissed him perfectly well.

41. Obser.
of *Fistula
lachryma-
lis.*

One about 28 years of Age had been heretofore afflicted with an abscess on the outside of his Right leg, which not yeilding to the common endeavours of Chirurgery by laying open, digestion, &c. I was fetcht, and seeing the Ulcer of a great length, the lips of it jagged and callous, I cut them off and dressed the Ulcer with the common digestive, and sprinkled the Ulcer it self (which was fordid) with *merc. præcipit.* and pledgits of dry Lint, an *empl. bolo* over it, with a compress wrung out of Red-wine, and rouled it up. Having thus dressed up the Ulcer, I enquired into the original of the distemper, suspecting it to have risen from some malign Fever, or the reliques of some ill cured Clap. But the Patient denying that he ever had either of them, I endeavoured to inform my self of the method prescribed by those under whose hands he had been and discovered that he had taken *mer. dulcis. antimon. diaphoret.* and decoctions of *sarsæ*, &c. which method I again repeated, and proceeded in digesting the Ulcer some days, and put on a laced Stocking, but I could not make good Digestion in three days. I considering the evil quality of the Ulcer and the manner of life the Patient had formerly led, concluded the disease certainly venereal, and that the *mer. dul. &c.* prescribed him was not of sufficient force to quell such a Malignity. For daily practice sheweth that *merc. dulcis* given ones in two or three days will not check the lesser Species of the *Lues*; and where it is not powerful to cure, it maketh the erosion greater, and the disease becometh more inveterate. Upon which considerations, without further enquiry into the Disease, I attempted the cure by antivenereals, and gave him *Turbith min. gr. xij.* in a *bolus* with *conf. boraginis*; it vomited him 4 or 5 times, and purged him twice, and put him upon a *tenesmus*, which I took off that afternoon by a clyster of Milk with the yolk of an Egg, and endeavoured to excuse the churlish working of the Medicament. The next day I saw the good Effects of the Physick in digesting of the Ulcer, and resolved to prosecute the method or quit the Patient. I dressed up the Ulcer with *unguent. basilic. cum præcipitat. em-
plaster*

42. Obser.
of a *Pha-
gedenâ* on
the Leg.

plaster and Bandage, designing to effect this cure by Internals; to which purpose I repeated a Clyster that day and the next, and the fourth day gave him 16 gr. of *Turbith mineral*. in a Pill, which wrought as the former, and directed a Clyster again in the afternoon. That night he spit much, and in the following morning complained of a soreness of his Chaps; but I not observing him likely to flux, purged him a Day after with *Manna* in a Draught of Posset-Drink, supposing I should make a greater revulsion by vomiting him twice or thrice, than by raising a slight Salivation; but he growing impatient with the soreness of his mouth, I changed that resolution, and gave him 18 gr. of *Turbith*, and thereby fluxed him 19 or 20 days. In the declination of it, I prescribed him a decoction of *Sarsa*, and purged him with an Apozeme made in some of the Decoction. During the Salivation the Ulcer cicatrized by the application of the above-mentioned Epuloticks, and I finished the Cure by drying Diet and Sudorificks. After which he removed into the Country, and by a Milk diet recovered his strength, and his Leg became useful to him; but he continued the wearing his laced Stocking some time longer. When these Ulcers are treated as Scorbutical the Patient dieth tabid.

43. Obser.
of a Her-
pes milia-
ris in plan-
ta pedis.

One of about forty years of Age, having been long troubled with a *Herpes miliaris* which had spread it self on the sole of one of his Feet, came to me for Cure. He had taken *Merc. dulcis*, *Antimon. Diaphoret.* &c. Medicines proper enough to cure the milder Species of the *Lues Venerea*; but the Patient being irregular, and not acknowledging it Venereal failed of his Cure; At the first sight of the Ulcers I concluded them Venereal, and resolved to proceed with him by such a method, or leave him to seek his cure elsewhere; and began by purging him with *Pil. Rudii & merc. dulcis*, and afterwards prescribed him a few Pills of *Æthiops mineralis cum terebinth.* One of which he took every morning drinking a draught of a medicated Ale after it. After he had taken six of the Pills, I began with the Cure of the Ulcers, dressing them with the *fozus* and liniment set down in the Cure of *Herpes*; but that not answering my expectation, I wash'd the Ulcers and parts about them with warm Milk, then having cleansed and dried them, I rubbed the lips of them all with a Caustick stone, till I had eradicated and smoothed them fit for to cicatrize, and then wash't out the lixivial salt to prevent its farther penetration. From that time I dressed them up with *Merc. præcipitat.* and put on a laced sock. The third or fourth dressing the Sloughs crumbled off, and the Ulcers appeared well cicatrized. But within few days they all brake out again. At the sight of which I concluded the Ulcers Venereal and prevailed with him to take *Mercury*, and began with *℞i. Calomel.* and the next day gave him a dose of *Theriac. metallor.* and repeated it two or three days, I designing that way to cure these Ulcers. But the *Theriac* not moving him by stool or vomit, he wrangled with me, supposing I could not cure him but by such Medicaments as worked one of those ways, whereas we know by experience, that *Mercury* frequently cureth those Ulcers by altering the quality of the Humours; but I comply'd with his desire, and gave him a Dose of *Turbith* gr. xij in a Pill that vomited him five or six times, and purged him twice or thrice. The next morning he complained of the soreness of his mouth. I advised him to drink warm Posset-drink, and to take a Clyster, but he did neither. I being engaged in the Cure, thought it best to hasten a Salivation, before he should be aware of it, and gave him two Doses more of the *Turbith* encreasing each Dose two grains. These made his Chaps sorer, and would have fluxed him, but he being ungovernable it caused a *Tenesmus*, and ran down in a *Diarrhæa* with a large evacuation, and terminated in a Dysentery. Upon the sight hereof, I would have prescribed him such Remedy as is usual in those cases, but he was so impatient at the accident

dent as to admit of no excuse from me, nor any of my Prescriptions. Indeed the *Herpes* was dryed, and he had an eminent Physician his friend who relieved him by his Prescriptions, and restored him to health soon after, and could as easily have then prevented the relapse; but the Patient being well, concluded he should continue so, and brake off abruptly from him without any observation of Diet-drink, Sweating &c. and became so good natured as to make me a Visit in acknowledgement of his Cure. But about a month after he sent for me, complaining of an itching he felt in the sole of his foot, he supposed from his too much walking the day before; I looked upon it and saw a heat rising in the skin. I believed it a return of the Disease, but having resolved not farther to engage my self in the Cure, I left him with a favourable construction of it. The next News I heard of him, was, that one pretended to Chirurgery had undertaken the Cure of it by bathing it with a Decoction of *Broom*, and boasted so confidently of the Cure, as if he had already performed it, calling them a few Kibes. But whilst he was picking of these out, the Patient shewed me a swelling upon the shin-bone, and desired my judgment of it. It was a very well grown Node, and I guessed by the Patients thin Chaps that it was no small disturbance to his rest, however it was a confirmation of the quality of his Disease, and might serve to alarm him to provide for his Cure. I was then taking a Journey into the West-country, and at my return was informed that he died under some Empericks hand in his course of Physick.

One of about forty years of Age, having *Herpes exedens* very large on several parts of his Body, came to me much emaciated thereby, he having been many years afflicted with them. He had also some Nodes lately risen on his Legs. I purged him with decoct. *Epithymi*, and afterwards gave him *præcipitat. albus* ʒj. to 25 grains Daily, and washed the several Ulcers with *Lac Virginis*, and dressed them up with pledgets dipt in the same to dry them, till I could by Internals cure them. But in few days I perceived this Patient had been so accustomed to the taking Mercurials, as the *præcipitatus albus* was of no force, therefore I forbore the longer use of it, and gave him 10 gr. of *Turbith mineral*. it vomited and purged him moderately. The next day I saw the Ulcers drying, and from that time dressed them only so as to defend them from sticking to his linen, the third day I repeated the *Turbith*, and the fourth day after gave him another Dose, and between whiles Clysters were administered and sometimes we purged him with *Manna* in a Draught or two of Posset-drink. Thus the Ulcers were cured and the scabs shelled off. I then purged him with the bitter Decoction four or five Days, and confined him to a drying Diet, and decoct. *sarsæ*, sweating him for some time with Diaphoreticks; but finding himself well brake off from this Course before he had been fourteen days in it, which occasioned some little eruptions; but by the taking of a few gr. of *Theriac. metallor.* with our purging Extract, and sometimes *Bezoard. minerale*, with a decoct. *sarsæ*, they were dryed up, and in progress of time the malignity was wasted without keeping of his House.

One of about forty five years of Age, of a lean dry body, had an Ulcer on the outside of the *Biceps* on the left Arm, which upon search with a probe I discovered to be carious. He had also three distinct Ulcers on the *os Tibiæ* of the right Leg a little above the Ankle, which were also carious. That on the Arm took its original from a Node, as the other on the Leg did from a *Gumma*. They had been some years Ulcerated, and I suppose the malignity discharged it self there, for other Symptoms of the *Lues* he had none at that time. I began with the Cure of these Ulcers by the application of Causticks to remove the external *Callus*, and make way to the bones. That in the Arm lay deep, and required detersion and dilatation, which was the work of some weeks; but the

44. Obser.
of many
Herpes
exedens,
and Nodes.

45. Obser.
of Ulcers
in the Arm
and Leg
with Ca-
ries.

others on the *os tibiæ* lay superficial; and as the Eschars separated in some of them, bits of bones came away with them. Where any remained intangled in loose flesh, I sprinkled that flesh with precipitate daily, and with that and the Vitriol Stone made way for the taking out the remaining bones, and with much ease cicatrized those Ulcers, the exfoliation of these from the main bone having indeed been made to my hand by the strength of Nature, and required no more from me than the making them way to come forth. But that *caries* in the bone of the Arm lay slab'd in matter, and was not so easily come to; and when it was, it did not yield to the ordinary application. Therefore after I had sometime kept it unsuccessfully dilated, I passed a *canula* in and by an actual cautery, dried the *caries*, and from that time dressed it dry with dossils pressed out of *sp. vini*, and waited its exfoliation. And to hasten the work I began to purge him with an *infus. senæ*, &c. and afterwards with *Calomel* which I repeated often in a lenitive *bolus*, and put him to the drinking a Decoction of *sarsa*, &c. and with sudorificks sweat him: but after some days observing the bone did not exfoliate, I gave him two or three doses of *Turbith*, and made a revulsion thereby. From that time the Ulcer dried, and an exfoliation was made of some small rotten bits of bones, and the *callus* which thrust them off united with the musculous flesh, and the Ulcer incarnated as I diminished my dossils, and cicatrized soon after. The Ulcers being cured thus, I concluded the course of Physick by purging, diet and sweating.

46. Obser.
of a Node
laid open,
with the
consequence,

One about 30 years of age of a gross body having been much pained on his right leg with a great node upon the shin, put himself into the hands of an Empirick for Cure; who after a long course of purging, sweating, &c. failing in his cure, employed me to lay it open. I obeyed, and having encompassed the tumor within a line, I applyed the white caustick. The next day I found the tumour sunk; but the caustick had penetrated to the bone according to the length and breadth that was designed. I cut the Eschar round, and raised it with the *Periosteum*, and saw the bone sound, and naturally white and smooth. I dressed it with pledgets dipt in *linement Arcei* warm, and the remaining Eschar with *unguent. basilic.* to hasten its separation. After some few days the Eschar separated, but the Ulcer grew painful and inflamed, and would not digest; upon which consideration I enquired into the internal prescriptions and finding them not of sufficient force, I prevailed to give a few grains of *Turbith minerale*, and thereby made a revulsion. From that time I digested the Ulcer with that common digestive *ex Terebinth*, &c. and cured it as an Ulcer with *caries*; during which the malignity was eradicated by Antivenereals.

I am not against the applying of medicaments to further the resolving of nodes, but the laying them open till they have made their way by apostematation seems to me unreasonable, it being not only painful but also a prolonger of the cure. For supposing you do remove the node and cure the Ulcer, yet unless you do eradicate the malignity, other nodes will arise. Whereas if Antivenereals be rightly administered, you may resolve the Nodes by them at the same time, I once saw a very large node upon the *os frontis* resolved merely by a course Diet-drink, purging and sweating. Sir *Fr. Prujean* was the Physician, and Mr. *Pearce* the Apothecary attended the Patient for his Master *Laxton* as I suppose. The course was long and more strict than our Patients will now endure; but by Mercurials we do more certainly resolve them, and in a less time.

47. Obser.
of *Ozæna*,
Ulcer in
the Palate,
Nodes, &c.

One of about 40 years of age, of a strong constitution, afflicted with nodes in his Arms and Legs, an *ozæna* and an Ulcer in his palate, in both which the bones were *carious*, had been eight weeks in Physick under the hands of an Empirick,

Empirick, and being at a loss consulted me. They shewed me some Instruments they had devised to hook out the bones; they also shewed me some little bits of bones which they had broken off from the whole. I admired the ignorance of the Empirick to glory in such work, but am since satisfied that a confidence in prating is a sufficient basis to build a practice upon amongst some kind of People. As to his Instruments they were well enough contrived to pull out bones, but it would have been more for his credit to have Designed some way to have kept them in. For in some of those places the least diminution of a bone causeth a deformity; and in others, as those of the Palate, there will want a supply of *callus*, and so Consequently it would not only spoil his drinking but his voice. Upon which consideration those Instruments were laid aside, and *errhina* were prescrib'd, as in the method of Cure hath been shewed, of which he snuff up or injected some into his nostrils often in a day. In order to his Cure I resolv'd to Salivate him by unction; to which purpose I let him blood and purged him with a lenitive *Bolus*, and afterward bath'd him 3 or 4 times; then caused him to be anointed, and thereby raised the Salivation; all which time I had regard to the washing his Chaps and keeping up his strength. About the 24. day the Salivation declining, I purged him with the bitter Decoction, and then put him into a *decoct. farsæ*, &c. and sweat him, proportioning his Diet drying according as his mouth healed. During the time of his salivating the Ulcers in his Nose cured, and so did that in his Palate, but the bones they had pull'd away left the marks; yet that in the Palate was supply'd by a small Plate which was retain'd by a Sponge. Some of his Nodes discuss'd during his Salivation, and the other in the time of Sweating. He being thus cured, we ended our Course of Physick with bathing.

One of about 28 years old being grievously afflicted with a Catarrh, having used many remedies unsuccessfully, a *Seton* was advised to be made in his neck. I being sent for to make it, found the Patient in bed so emaciated as it was impossible he should continue it there without great pain. I desiring some way to be useful to him, enquired into the quality of his Disease, and looking into his throat saw the tonsils extremely ulcerated, the *Uvula* and that part of the Palate eaten away. I concluded it Venereal, and before I stirred from him, discovered it was the effects of a Chancre ill Cured.

48. Observation of *Uvula* and Palate eaten away.

I took leave of him, and acquainted those that sent me of the nature of his Catarrh. They having satisfied themselves of the truth, put him into my hands. There was no great matter of credit to be gotten in endeavouring a Cure, where the Patient should be left to snuffle all the days of his life; but I obey'd them and prescribed him that night *℞. mer. præcipitat. albus* in a spoonful of white bread and milk. I directed the washing his throat with one of the Gargles set down in the method of Cure, and dressed them daily with *lac. sublimat.* prescribing him a *decoct. farsæ* to be Drank with a third part of Drink, at the least thrice a day. I repeated the *præcipitatus albus* morning or evening, also a clyster sometimes to keep his body soluble. By this method I cured these Ulcers in the space of three weeks. Soon after as he recovered his strength, I left off the use of the milk and prosecuted the course by a strict Diet, *decoct. farsæ*, diaphoreticks, &c. then fitted his Palate with a Plate of silver which he could put up and take out at pleasure. It formed his voice and served to lead the Drink its right way. Some months after I saw him fat and well, and he assured me that the Ulcerated parts were so contracted together that he had no farther use of the Artificial Palate.

49. Observation of Ulcers in the Tonsils, Palate, &c. with a Node on her Leg.

A Woman of about 28 years of Age having been some while vexed with the lesser species of this Disease, put her self under some hands for cure; but during that method she complained of a soreness in her throat, which increasing, she

consulted

consulted others, and afterwards others, but unsuccessfully. (I suppose from her own irregularity.) Some months being passed, her friends recommended her to me. Both her Tonsils were much ulcerated; there was also an Ulcer upon the back part of her Palate and *Uvula*. She had also a Node upon her right leg, and wandering pains; also a *fluor albus*. I prescribed her a Lotion as in the former Observation, and dressed the Ulcers with *lac. sublimat.* I let her blood and directed her a Clyster that night, and the next morning *℞. calomel.* I repeated this latter daily, she drinking a draught of *decoct. sarsæ* after it, disposing her self to a breathing sweat, and once in four days was purged with an *insus. senæ*, &c. Thus I dried those Ulcers, but by the frequent repeating the *Calomel*, her chaps grew sore, and she salivated, which I was not troubled at, her Node requiring it. Upon which consideration I gave her 12 grains of *Turbit. minérale* and raised it higher; and some days after when I saw the Salivation decline and the Node unresolved, I applied a Mercurial Emplaster the whole length of that leg, and thereby continued the Salivation longer till that resolved the Node. That done, I purged her with the bitter decoction, and put her into a strict course of Diet-drink, and sweat her. After her mouth was cured, looking into her throat I saw the right tonsil cicatrized, but there remained unequal lips, which were troublesome to her. I also felt with my Probe a *sinus* running downward; it was made by a coalition of the flapping lips: I suspecting these might cause some fluxion, or at least such an uneasiness as might beget in her a suspicion of relapse, I laid open that *sinus* and cut off those lips with the other *Cicatrizes*, and by rubbing the basis of the Ulcer with a Vitriol Stone cicatrized it afterwards smooth, and dismissed her Cured.

50. Obser.
of relapse
with Nodes
&c.

A Woman of about 28 years of age much emaciated was brought to me broken out all over her head, face, and several parts of her body and limbs. It being with a virulent *Gonorrhæa*, the cause whereof not being discovered, it continued long upon her, and after some months was accompanied with a pain in her head; for remedy whereof she consulted her Physician, but she being her self ignorant of the cause could not inform him, and consequently suffered very long under it: but after these eruptions the *Gonorrhæa* stopped, and the pain in her head ceased. What these breakings out were she had been lately informed, and desired my help. I let her blood and purged her with *decoct. senæ Gereonis*, and by a few doses of *præcipitat. alb.* and a purging Diet-drink I dried up these *pustulæ* and Ulcers, and designed then a *decoct. sarsæ* with sudorificks; but she believing her self cured retired to her own house. With in half a year after she came to me again, afflicted with pains in her head, and Nodes on her shins, and Ulcers in her tonsils. I let her blood and advised a Clyster, and dressed the Ulcers in the tonsils as hath been said in the like case, and prescribed her *calomel. ℞. in ℞. diascord.* and purged her the next morning with a solution of *Manna* in Posset-drink. After I had by *calomel.* somewhat digested those Ulcers I raised a Salivation by Unction, which she bore very well, and was thereby freed of her Nodes. In the declination of the Flux I purged her with the bitter decoction five or six days, then put her into a *decoct. sarsæ*, and afterwards by drying Diet, sweating, &c. the pain in her head went off, and the Ulcers of the tonsils were (long before I dismissed her) well and perfectly Cured.

51. Obser.
of Ulcers
in the
fauces with
a Gumma
on the Musc
Mastoides.

A Woman aged about 30 years came out of the country upon a supposition of the Kings Evil. She had a hard swelling encompassing the muscle *massoides* on the right side of her neck of a great thickness. She complained also of a soreness in her throat, and of a stinking tough slegm which she frequently hawked out, especially in the mornings. I looked into her throat and saw an inflammation

inflammation upon the further part of the Palate and *Uvula*, but no Ulcer in the tonsils. The inflammation of the Palate gave me cause to suspect some latent Ulcer, and that her Disease was Venereal; but she denying it, I prescribed her a *decoct. hord.* with *syr. de ros.* & *diamoron*, also an *empl. de mucilag.* with *de ranis cum mercurio* to apply to the Gumma. Dr. Lenthall who brought her to me, prescribed her an opening apozeme and to be let blood in the Country. Thus we dismissed her, but within few days after she returned to us again, the Ulcer having seized upon the *Uvula* and spread it self to the edges of the Palate. Upon sight thereof we disputed not of her disease, but considered of her Cure. She had of late years been subject to great discharge of the *menstrua*, and was thereby rendered of a lax and weak constitution, and her body having been so lately purged and bled, there required no other preparation than of a warm room, which was provided with all Expedition. For those Ulcers that arise on the interior part of the Palate, soon corrode their way through, if the alarm be not taken from the inflammation that preceeds, a little mischief there being for the most part irrecoverable. To prevent which we gave her that night $\mathfrak{Dj}$. of *Calomel.* and repeated it so often as we might conveniently do, and prescribed her a *decoct. sarsæ* to drink with milk. We also prescribed her some of the Lotions set down in the Method of Cure, some whereof we cast up with a Syringe into her nostrils, and with other she gargled her throat often in a day. But the cure of the Ulcers was compleated by frequent taking of *merc. dulcis.* The Gumma also lessened, but she having recovered some measure of strength, and her chaps being already sore by the *calomel.* which she had taken, we gave her 2 doses of *Turbith*, beginning with 7 gr. and so higher, by which we raised the Salivation, and thereby resolved the Gumma. In the declining of the Flux we purged her with an Apozeme wherein was decocted *senæ, polypod. rhab. agaric. turbith, jalap, &c.* with the addition of *syr. de spina cervina.* Then with drying Diet-drink, sudorificks, &c. we finished the course, and cured her.

A young Man was committed to my care having an *Ozena* in his nose affecting the *septum* and *alæ*; it seemed to be most on the right side, with inflammation and great Swelling. In undertaking the Cure of these Ulcers you ought to be cautious in delivering your prognostick; for the bones and cartilages are soft and covered with a thin membrane. Which being once corroded corrupts quickly, and the least defect in them leaveth a blemish in that part of the Nose. The external inflammation is a shrewd sign that the Ulcer is deep, and consequently that the bones and cartilages are carious: therefore let not the rectitude of the part deceive you, for that may be supported by the swelling and crusty matter within, and upon the removal of them the Nose or sides of it frequently sink; and if any deformity therein happen while they are under your cure contrary to your prediction, they will certainly impute it to your neglect or ignorance. In this Patient I suspected the right *ala* from the external inflammation, but promised my utmost endeavours, and began my work with injecting a *decoct. ex rad. althææ, sem. hord. cydonior.* and imbrocated the external parts with *unguent. popul.* also applied a Cerote of the same; then let him blood, and directed a Clyster that evening. After his first sleep he took 25 grains of *Calomel.* in *conf. ros.* and was purged the morning following with an infusion of *senæ, &c.* afterwards I purged him with *Calomel.* and *pil. Rudii*, till I had removed the fluxion off his Nose. After the crusty matter separated from within, I syringed and cleansed those Ulcers with one of the decoctions set down in the method of cure. Having thus disposed his Nose to cure, I gave him a few doses of *Turbith.* and raised a Salivation, but the Ulcers cicatrized before he salivated, yet I fluxed him 17 or 18 days. In the declination of it I purged, and sweat him with *decoct. sarsæ*, and there appeared

52. Obser-
on an
Ozena.

53. Obser-
vation of
a Node,
and of Ul-
cers in the
Tonsils.

peared a small bending inward of the right *ala*, I suppose from the *Caries* had been in that cartilage; it was thrust out to his own satisfaction by a small hoop made by a bit of a searching candle painted of a flesh colour, but after some few days he left that off, it not being worth the while.

One of a full Body, and strong constitution, who had been long diseased with the several Species of the *Lues Venerea*, and been cured by me some months before of a *herpes exedens*, came now to us with a large Node upon his shin of the right leg. He was purged by his Physician, and prescribed a *decoct. sarsæ*, &c. also *Antimon. diaphoret.* Embrocations and Emplasters were applied the while to resolve the Node; but after six weeks course of Physick the Node remained almost as painful as before. Upon which consideration it was concluded to lay it bare. I did lay it bare with the white Caustick, and divided the Eschar to the bone, and at the next dressing raised the Eschar off, then rasped the Node off, and dressed it dry, as hath been set down in Ulcers with *Caries*. The lips of the ulcer I digested with *unguent. Basilic.* applyed warm, & afterwards incarned the bone, & cured the ulcer in the space of two months, not without great pain to the Patient and trouble to me; whereas I might have resolved it, and eradicated the malignity, and freed him of the *Lues* almost in half the time. Within one half year he came to us again, not complaining of his Leg, but with Ulcers in both his Tonsils. These were certainly Venereal, & I concluded they would be so acknowledged, and that I should have an easier work of these. But the Patient would not be confined within doors, or admit of other Physick than a decoction of *sarsæ*, and a few powders of *antimon. diaphoret.* Three quarts of the foresaid Diet-drink were allowed him daily. I have sometimes seen him drink it up in a Morning as fast as if it had been *Tunbridg* waters. I once enquiring the reason why he drank them in such haste, he replied, he was to dine with some good Fellows, and that he did it to make way for better liquor.

Thus he governed himself till the Ulceration increased, so that it was great pain to swallow any drink. He complained exceedingly to me that I could not at least palliate those Ulcers, whereas in truth I used my utmost endeavours by all the Medicaments I could devise; but they spread, and were accompanied with such defluxion, as at last when he strove to drink, part of it would gush out of his nostrils. Upon which consideration the Physician was fetched, and a submission was promised to his rules. The Cure was begun by a Clyster, bleeding and purging, with an infused Potion, and the day after 25 gr. of *Calomel.* was given him in a spoonful of white bread and milk, and repeated daily or every other day, Clysters or Purgatives being prescribed between while to carry the matter downwards. By this method his Ulcers were disposed to Cure, and he finding his throat easier had thoughts of dining abroad with his Friends. Upon notice whereof I got leave of the Physician to give him 14 gr. of *Turbith. miner.* which accordingly worked very well. I repeated it the next day to 16 gr. it likewise vomited him, and made him spit, and his Chaps swelled: the next day he perceiving that he fluxed desired the Physician would prescribe him Physick to purge it off, which was promised him; but a day or two after the flux not rising sufficiently, I brought him a *Bolus* of a mixture of *turb. min.* with *conf. borag.* which increased the Salivation. He sent for me, and offered me fifty pound to take it off; but I assured him there was no danger of his Life, and encouraged him to submit to it chearfully. He did so, and salivated 18 or 20 days as plentifully as I ever saw any. The salivation declining, he was purged with an infused Potion, and Diet-drink was brought him, he promising us that he would keep his Chamber, and observe a strict method in Diet, Sweating, &c. But he no sooner found his Chaps cured, but he returned to his wonted liberty: and being told that he would most certainly relapse if he did not prosecute

prosecute the Course prescribed by his Physician, he replied laughing, It's thy Course and not the Physicians, that he was very well, and if I would dine with him I should be a witness of it. I took leave of him, and saw him no more in half a year; and about that time he became more extremely diseased: for it is most certain, that Mercurial Remedies serve only to dispose these humours to be evacuated by Decoctions of *sarsa*, &c. with Sweating. How he was at last perfectly Cured, you may see in some of the following Observations.

A Woman of about forty years of Age, of a strong Constitution, having been long diseased with an *Ozæna*, was at length commended by Doct. Bate to the Cure of Doct. Jasper Needham and my Self. The matter had corrupted part of the *Septum*, and other bones within her Nose, and made its way externally between the ridge-bone and cartilages of the Nostrils, and fouled the said bone to the very brows. The gristles being thus separated from the foresaid bone, and having lost that part of the *Septum*, which should have been their supporter, it sunk downwards, leaving such a breach, that the Injections which we cast into her nostrils with a syringe spurted out there. After we had thus discovered the evil quality of the Ulcer, we considered how to proceed in the Cure; and in regard of the difficulty of the Cure, and the length of time which might be required in the exfoliation of these bones, we resolved without further dispute to salivate her by Unction. To which purpose we let her blood, and purged her with an *infusi. senæ*, &c. during which, *Errhina* were prepared of a lenient quality, such as have been proposed in the method of Cure, to loosen the crusty matter; and we enlarged the external Ulcer, along the ridge-bone, as far as it was carious, in order to the exfoliation of it. We digested those lips, and dressed the bone dry according to the method set down in the Treatise of Ulcers with *Caries*. After we had by *Errhina* and Lotions cleansed the internal Ulcers of their filth, we then proceeded by deterfive Injections, as prescribed in the method of Cure, and put up a *Canula* in each Nostril made of a goose quill covered with a bit of *empl. diachyl. simp.* spread on a soft rag. These served to bear up the cartilages of the Nostrils level with the end of the bone (which before stood as it were looking over them) that they might be in a capacity (if it was possible) to unite with it: While we were thus disposing the Ulcers to Cure, we proceeded in the anointing her Legs and Arms, and thereby raised a Salivation, which continued upon her more than three weeks. During that time the Ulcers cured within her Nose, and the cartilages stood firm, and even to unite internally with the bone without the use of the *Canula*, but the bone there not being exfoliated, we continued the Salivation longer by prescribing *Mercurius dulcis*, &c. and all that while we took care of her mouth, that no inconvenience should happen to her Jaws, &c. and kept up her Spirits with Broths, Posset-ale and Cordials. After we saw the bones exfoliating we purged her with an Apozeme, and prescribed *decoct. sarsæ* with Sudorificks to sweat her. During which the bone exfoliated, and the Ulcers cured with a Cicatrix not unseemly. We then concluded our Course of Physick, leaving her more healthful and strong than she had been in many years.

A Man of about 36 years of Age had a large Ulcer on the roof of his mouth with a *Caries* on the *os palati*, also many Nodes, viz. a great one upon the left temporal muscle reaching to that brow; also two on his right Arm, one whereof was on the *os humeri*, and the other on the *Ulna*; one very large upon the shin of the right Leg, and another on the outside of his left: which latter was soft and inflamed, and was by some proposed to be opened, but it seemed to me to be a *Gumma*. He had been long afflicted with the Disease, and was lately come out of a Salivation raised by *mer. dul.* in which he had spit very much. I touched the Ulcer with *aqua divina* warm, and advised the dressing it

54. Observation of an *Ozæna*.

55. Observation of Nodes, *Gumma*, and Ulcers in *Os palati*.

it twice a day after the same manner; to the inflamed *Gumma* I applyed and *empl. è bolo* to prevent its apostemating. The rest of the Nodes I designed to scatter by a salivation with unction. To which purpose I let him blood, and directed a Clyster, and the next morning purged him with *ʒj. Calomel.* in a lepitive *Bolus*; and to dispose him to rest, I gave him some nights *ʒj. Calomel.* in *ʒi. diascord.* whereby the Ulcer in his palate was the better digested. Having thus prepared his Body for the Uction, I caused his limbs to be anointed daily till his Chaps swelled much; then I desisted and advised Posset-drink, Broth, &c. to be always ready for him to drink, and keep up his Spirits. There was also care taken to syringe and wash his mouth. During his Salivation, the Ulcer in his palate cast off a scale of a bone half an inch at least in length, and presently after cicatrized firmly; his pain ceased, and the *Gumma* resolved, and all the Nodes diminished much, save that on his shin; yet he did not spit a quarter so much in this Course as (he said) he had done in the former raised by *merc. dulcis.* I continued him in the Salivation about twenty days, then purged him with the bitter Decoction five or six days, and from that time kept him strictly to his Diet-drinks, and with Sudorificks sweat him, and proportioned his Diet more drying accordingly as his Chaps healed till I thought him cured, and then I gave him more liberty to nourish his body, and to drink the Decoction of *sarsa* with milk twice a day, and bathed him 4 or 5 days; and kept his body soluble with a lenient Electuary. Thus I dismissed him, yet there remained somewhat of that Node on the shin, but it being without pain I supposed it would Resolve, as indeed it did within a fortnight after, and he continued well.

56. Obser.
of Nodes.

One of about thirty years of Age, of a full Body, having been long afflicted with Nodes and excessive pains on divers parts, especially on his head, put himself into my hands for Cure. I designed a Salivation by Uction, to which purpose I prepared his Body by a Clyster, Venesection and a purging Apozeme; then caused him to be placed near the fire, and to anoint himself from the soles of his feet to his groins, and to the arms and shoulders, and having put on his stockings drawers and waistcoat he was laid in a warm bed, and with a draught of warm Posset ale disposed to a breathing sweat. Thus I proceeded daily in the anointing him till I had wasted two pound of Uction, but he had formerly taken so much Mercury, that it seemed to be familiar to him, upon which account I proceeded in the anointing of him, but it ran downwards one night in a *Diarrhæa*. I was fetched to him early in the morning, and was informed he had near sixty stools. During the time I was with him they were mucous and bloody, with much pain, he having a *tenesmus* with it, which put him upon a continual excretion. I caused a Clyster of milk with yolks of Eggs to be cast up, and prescribed decoct. *C. C. calcinati* to be made, and drank with milk, to some of which I added a few drops of liquid *Laudanum*. I also injected in a three or four spoonfuls of *ol. hyperici* with a syringe, and advised it to be often repeated to defend the interior coats of the intestine from excoriation. I prescribed him a Pearl Julep and elect. *diascord*, as it is set down in the method of Cure, to be taken once in three or four hours; thus in four or five days the *Diarrhæa* stopped. Then I prescribed him a *Sarsa* drink with an addition of milk till he had somewhat recovered his strength, purging him in the interval with elect. *diacatholic.* &c. By this *Diarrhæa* he was freed of his pains, and of some of the Nodes. Those which remained were much lessened, and by a strict Diet decoct. *sarsæ* and sudorificks were quite resolved, and he enjoys a good health to this Day.

It may be here objected by some, that if this Person had been more purged or well bathed before the anointing, the Salivation would have risen easier, and thereby

thereby the *Diarrhæa* might have been prevented. I do confess that the bathing doth much facilitate the raising of the Salivation, but we cannot have always that conveniency. Besides, where we do bath, these Accidents have happened, and will befall any one of us in spite of all our endeavours. Yet I must tell you, when a *Diarrhæa* thus happeneth in the raising a Salivation, it renders your Cure certain, if you prosecute the Method as I here did. For whether the Mercury work upwards by Vomit or Salivation, or downwards by Stool, it is not material, so the peccant Humors be evacuated and disposed to be carried off by Sudorifics, &c. But if the Patient grow froward upon such an accident, and will not submit to a regulation in Diet, Purging, Sweating, &c. the Humors do again ferment and render the Cure more Difficult.

One of about forty five years of Age, having been long afflicted with the *Lues* in its most inveterate Symptoms, Nodes, *Gummata*, and an *Ozæna*, and had passed through many Courses of Physick, came to me extremely extenuated. He had one Node upon the *Lambdoïdes* very great, and another upon his right Eye-brow; others upon his Arms and Legs. I began with the letting him blood, and sent him a Clyster that Evening. I syringed his Nose with decoct. hordei, rad. althææ, sem. cydon, &c. and after I had cleansed it of its crusty Matter (with which some Bones came forth) I daily injected some of the Lotions prescribed in the method of Cure. I bathed him five or six times, and the while kept his Body soluble by Clysters, or by a lenitive Electuary, and allowed him boiled Mutton, Veal, or Chicken for his Dinner, and a couple of new laid Eggs for his Supper, and small Ale for his Drink. I also prescribed him a grain of *Laudanum*, or some anodyne Draught to appease his nocturnal Pains. After I had done bathing him, I caused his Legs, Arms, Shoulders, Spine, and Hips to be anointed Daily, and sweat him in a warm Bed with a Draught of Posset-drink. After he began to spit, I anointed him more sparingly, only his Legs and Arms, and when I saw his Chaps swell'd sufficiently, I forbore the anointing, and kept him to his Posset-Drink and Broath, washing his Mouth with decoct. hordei, rad. althææ, liquiritiæ, &c. He Salivated very well near a Month, but before he had spit fourteen Days, the Pains Diminished, and the Nodes lessened, and that filthy Matter ceased to Discharge out of his Nose: Also a *Gumma*, which seemed ready to burst, Dried up. In the Declination of the Flux I put him into a strong decoct. sarsæ, &c. with Milk, and nourished him with good medicated Broths. As his Strength increased, I purged him with the bitter Decoction some Days, and after his Chaps healed, I kept him strictly to the *Sarsa*-Drinks without the Milk, and sweat him with antimon. diaphoret. gum. guaiaci, bezoard. orient. and ordered his Diet as drying as he was Capable of, Purging him, as customary, once in four or five Days. Thus in the space of eight weeks the *Ozæna* was perfectly cured, and all the Nodes resolved: but notwithstanding he complained of Pain in all his Limbs, and was so weak that he was scarce able to go, and bemoaned his condition, supposing he should never be Cured. I was of opinion that he was Cured, and that those Pains proceeded meerly from the emaciation of the Muscles; but I referred it to a Consultation, where it was Declared Positively that he was not Cured, and that he ought to Salivate again. These Proposals dismay'd the Patient, and disturbed me not a little; for, in truth, he was too weak to Salivate. I persisted in my former Opinion, and prevailed with the Patient to retire two or three Miles into the Air, and there to Drink a Decoction of *sarsa*, &c. with Milk, and to give himself liberty to feed upon Meats of good nourishment, and advised him to bathe in Milk and Water sometime. He did so, and I supplied him with Papers of Ingredients to make the Decoction, also with a lenitive Electuary of *Cassia*, *Tamarinds*, *Manna*, &c. to

57. Obser.
of *Ozæna*,
Nodes,
and *Gum-
mata*.

keep his Body soluble. In a few Weeks he grew fleshy, his Pains wasted, and from that time he enjoyed a good health for many Years.

58. Obser-
vation.

One about Twenty 8 Years of Age was afflicted with an *Ozæna* of an old date; it had Perforated the *septum*, and cast forth some rotten Bones, one whereof he shewed me. He had also Nodes on both his Legs and on his right Arm. He was emaciated by reason of his continual Pains, and the much Physick he had unsuccessfully taken. I injected a *decoct. hordei*, &c. into his Nostrils, and after the crusty Matter separated, I prescribed him an Errhine to snuff up his Nostrils often in a Day. And having resolved to Salivate him by Unction, I disposed his Body thereto by Clysters, Lenitive Bolus's (to which latter I added *Calomel.* to take off his Pains) and prescribed him *decoct. sarsæ*, &c. with Milk, also a liberty in Diet, and bathed him the while. Having thus somewhat recruited his Spirits, I caused him to be anointed Legs, Arms, Hips, and Shoulders, till I had raised a Salivation. Then I kept him to Posset-Drink and Broth. I also allowed him a Pint of Ale Daily, sometimes burnt Wine or other Cordials, by which he was enabled to Salivate near a Month. During that time the *Ozæna* cured, and some of the Nodes resolved. As the Salivation Declined I Purged him with the bitter Decoction, and then put him into a *decoct. sarsæ*, and sweat him with Diaphoreticks, and Purged him once in four or five days, he Observing the while a strict Diet. After all I bathed him again a week or ten days, and permitted him a nourishing Diet, and kept his Body soluble *cum elect. nost. laxativo ex cassia, pulp. tamarind. manna*, &c. Some of his Nodes remained till I bathed him; but if they had not then resolved, yet I should not have doubted of his being well cured: For it doth sometimes happen, that great Nodes dry and harden into such an *exostosis*, as will not yield to any remedy. And indeed they being without pain, we need not to be so solicitous in their removal; for beyond Sea I have seen some well cured, the Nodes continuing upon their Legs knotted like a Crab-tree Stick.

59. Obser.
of Lues Ve-
ner. compl.
with Can-
cer, &c.

A Woman of about 50 years of Age, of an ill habit of Body, having passed through various courses of Physick, was brought to me complaining of pain in her Arms, and Nodes on the back of both her Hands; also a cancerous tumour on her right Breast. She importuned me to put her in a Course of Salivation by Unction, and took a Lodging near me. I thought it necessary enough for her, and told her I would Prepare her Body for it, and consult her Physician in the manner of Salivating her. Accordingly I let her blood, then purged her with a solution of *manna* and *cremor tartari* in Posset-drink, and bathed her four or five times; then gave her alternately two or three Doses of *Calomel.* to try how the Flux would rise. But she growing impatient in the delay, sent for a Physician, to whom she related the original of her Disease, and that she had taken the Spitting-Pills formerly unsuccessfully, therefore desired to Salivate by Unction. Some objection was made against it, as doubting her *viscera* were naught. But he complied, and promised to visit her as occasion should require. I sent her a Pot of Unction the next day, wherewith her Legs and Arms were anointed, and she returned to her warm Bed, and was disposed to a breathing Sweat by a draught of Posset-drink. By this method the Salivation was raised, and she fluxed moderately about 20 days, during which her Pains remitted, the Nodes resolved, and she recovered the use of her Hands. The Cancer lay also quiet. The Salivation declining, she was purged with the bitter Decoction, and some days after drank a *sarsa* Drink, and sweat. In the going off of her Flux she complained of the shortness of breath, and was afterwards subject to fainting. Whereupon her Physician was consulted, who supposing it hysterical prescribed as followeth, *Rx Galbani, sagapeni an. ʒj. asæ-fetid. ʒß. cassor. ʒj. bals. Peruv. q. s. f. pil. quarum capiât ʒj. omni nocte. Rx Galbani*

3vj. fiat emp. pro umbilico. Superbibat post pilulas julapii sequi. 3iij. R. Aq. brion. comp 3ij. pulegii: mirabilis, hyssopi, an, 3iij. tincturæ croci 3ij. Sacchar. albis. 3ß. ms. f. julapium. After she had proceeded in this course eight or ten days, the complaining of her Stomach, and of an offensive Smell she thought arose from thence, her Physician prescribed her as followeth: R. Salis vitrioli 3iij. capiat statim in posset alâ: si semel tantum vomuerit, capiat 3j. ejusdem in eadem posset alâ, and so to repeat it the third time if her strength would bear it. She did so, and was laid to rest with this following Draught: R. Laudanî gr. j. aq. menthæ 3jß cinnamomi pulveriz. 3ß. diascordii 3ij. f. haustus horâ somni. The day following the Physician found her much relieved, and prescribed her this Decoction: R. Sarsæ 3iij. santali albi 3ij. chinæ 3iß guaiaci 3j. digere horas sex in aq. com. 3viiij. vase clauso, dein decoq. ad mediam, addendo sub finem ingredientia decoct. pectoralis. Bibat copiosè & frequenter, addendo singulis haustibus mixturæ sequentis cochl j. vel ij. R. Aq. lamar. brion. comp. an 3ij. tinct. croci 3ß. sp. castores 3jß ms. This Potion was also prescribed her 3 or 4 days after: R. Tamarind. 3ß coq. in aq. com. sub finem addendo senæ 3iij. rhab. 3ij. sem. anisi 3ß. cape colaturæ 3iv. mannæ 3vj. syr. de rhab. 3j. syr. de spina cervina 3j. f. potio. By these Prescriptions she somewhat recovered, and removed from those Lodgings to others more airy in the same Street. And there another Physician was consulted and joyned with the former: he approved of what had been done and gave hopes of her recovery; and together they prescribed as followeth: R. Gum. galbani, ammoniaci, myrrhæ, bals. Tolut. an. 3j. croci gr. iv. cum opobals. Giluaditui 3ß. f. pil. quadruplo deaurandæ: cap. bis tervè quotidie. R. Gum. guaiaci cathartici 3j. syr. è capil. Veneris q. s. fiat mixtura molis, quam capiat tertio quoque manè ad quatuor vices. R. Aq. ceras. nigr. 3vj. è flor. paralys. aq. cinnam. bord. an. 3ij. margar. præparat. 3ij. sacchar. crystal. 3ij. ms. f. julapium, de quo bibat ad placit. Some while after she removed nearer the Country for the benefit of fresh air, and to drink Asles Milk, which she had already begun to do, and might have recovered if her Viscera had not been all rotten.

A poor Fellow aged about 50 years had grievous pains in his Head, and divers Nodes and gummata in several parts of his Body. He had lately come out of a course of Physick, and was so wasted as he could scarce stand, and had lost the Nails of his Fingers and Toes. I directed him a Clyster, and that night sent him an Opiat to calm his Pains and dispose him to rest, viz. of lauden. mer. dul. gum. guaiaci, &c. as is set down in the method of cure, and repeated it as occasion offered; and prescribed him a sarsa Drink with Milk. But after 2 or 3 days observing that he was much oppress'd in his Stomach, nauseating all that he took, I gave him a Vomit of infus. croc. metallor. with oxymel scillet. by which I emptied it of much viscous Flegm. From that time he recovered his appetite, and by good nourishment and mitigation of his Pains he recovered to a tolerable measure of strength. I then caused him to be anointed, Legs, Arms, Hips, and Shoulders, and repeated the anointing daily till I had raised a swelling in his Chaps. He salivated well, and was kept to warm Broath, Posset-drink, and sometime Ale and burnt Wine. During the Salivation he fainted often, and was seized twice with Convulsions, and with much difficulty I kept up his Spirits: but he got through it by the help of good Cordials, aq. the-riacalis, &c. In the declining of the Flux I purged him with the bitter Decoction, and finished the Cure with decoct. sarsæ, sweating and drying Diet and purging. Passing by this Man's House one day in the company of Dr. Wal. Needham, we went in, he was working in his Trade, he shewed us his Legs and Arths, there was not a Node left; he also shew'd us new Nails thrusting out, the Patient then declaring himself well, and indeed so he continued a Month or two; and then Pains began, Nodes and gummata also arose. I attempted the Cure by

60. Obser.
of Nodes
and Pains!

crude Mercury as it is usually given by some under the name of the Blew Pills, with a strong decoction of *sarfa*, *rad. bardanæ fol. japonariæ*, and with *laureola*. Indeed I consulted several that pretended great matters in the Cure of this Disease and omitted nothing whereby I could hope to relieve him, applying also Emplasters, and caustical Medicaments to the Nodes, by which I did resolve the biggest and most painful of them: but the malignity increasing, the patient made it his request to me to salivate him again by unction. Whereupon I let him blood, and directed a Clyster, then bathed him 4 or 5 times, and raised a Salivation by only anointing his Legs and Arms according to his desire. He Salivated very well, and during the Salivation he was freed of his Pains and Nodes, and by the Prosecuting the Course by Diet drink, sweating and purging, he seemed perfectly well; but yet he relapsed. I afterwards perceived his Wife had been all the while infected with the same Disease; but whether he got it from her, or through neglect of observing this latter Course, his necessity in following of his Trade constraining him to be daily abroad and in his Shop, and without a strict observance in that Course you will scarce Cure the lesser Species of the *Lues*) I contented my self in the Expences I had been at, and left him to others.

61. Obser.
of *Ozæna*
and Nodes.

A Man of about thirty years of Age, came out of a long Course of Physick to me, having an old *Ozæna* whereon some Bones had cast off: he had also pains in divers parts, and several Nodes. I resolved to salivate him by unction, to which purpose I let him blood, purged him, and anointed him, Legs, Arms, Hips, Shoulders, &c. by which, in few Days I raised a Salivation, kept him to Posset-Drink and Broath, and took care of his Mouth. His Nose was also dressed Daily, as hath been shewed in the like case. In the Declination of the Flux, I purged him with the bitter Decoction, and prescribed a strict drying Diet, *decoct. sarfæ*, Purging and Sweating, and dismiss him cured of the *Ozæna*, and the Nodes and Pains resolved. But some Months after, he relapsing came to me again, and acknowledged that he had not been so regular in his Diet as I had Directed (and in truth I had heard he had bragged of it) and that he would enter into a new Course of Physick. I let him blood, and Purged him six or seven Days with bitter Decoction, then vomited him with *Turbith. minerale* three or four times, Prescribing Clysters between while. After I had thus heated his Chaps, and Disposed the matter for Sudorificks, I put him into a Decoction of *sarfa*, and with *merc. diaphoret.* sweat him twice a Day, and kept him to a strict drying Diet, and by this method I cured and secured him from relapse; and so shall do as many as will submit to it: an instance whereof may be seen in many of these Observations.

62. Obser.
of an *Ozæna* and
Ulcers in
the Ton-
sils, and
Nodes.

A Man of about thirty six years of Age came to me with an *Ozæna*, Ulcers in both the Tonsils, and Nodes, with Pains in several parts of his Body, which together had extremely emaciated and weakened him. I syringed his Nose with a lenient Lotion, according to my custom, and afterwards prescribed some of the other *Errhina* for daily Deterision. I also Dressed the Tonsils with *lac. sublimari*. In order to his Cure, I let him blood, and prescribed a Clyster, and that very night sent him ʒi *merc. præcipitat. albi*, which he took in a spoonful of white Bread and Milk, and repeated the giving of it 3 or 4 nights after one another, carrying it off by Clysters Daily. During which I allowed him medicated Broths Posset-ale, and a Pearl-julep. After I had thus disposed his Ulcers to Digestion, so as that he was in a capacity to eat Meat, I permitted him to eat such as was of good nourishment, and prescribed him a Decoction of *Sarfa* &c. with an Addition of Milk to Drink daily, and every other morning gave him a few grains of *Theriac. metallor.* in ʒʒ. *conf. melissæ*, and thereby vomited him moderately, and purged him once or twice, and continued the use of

of Clysters accordingly as I saw cause, and bathed him often, I suppose eight days. Thus I removed his Pains, and cured the Ulcers, and purposed to have put him into a strict Diet, and to have finished the course by Sudorificks, &c. but some of the Nodes remaining, and the Patient having long before met with great Difficulty in his Cure, earnestly importuned me to Salivate him by unction, alledging it the sure way to prevent relapse. I seeing his Desire, and supposing it might be reasonable, did comply with him, and caused his Legs and Arms to be anointed daily till his Cheeks swelled. Then I kept him to Posset-Drink and Broth, and took care in the washing his Mouth. He salivated well about sixteen or seventeen Days, but then growing weak and faint, I caused his Feet and Legs to be bathed with warm Water, and fresh Linen to be put on, and by Clysters Disposed the Matter downwards, and kept up his Spirits with Cordials. Having thus refreshed him, I purged him proportionably to his strength, and finished the Cure by a course of drying Diet, decoct. *sarsæ*, Sudorificks, &c. in 3 Weeks. But he being extremely pained in all his Limbs suspected his Cure, but the Nodes being resolved, and the Ulcers so long before cured, I encouraged him to take his wonted nourishment, supposing these proceeded from the emaciation of the Muscles; yet I prescribed him a medicated Ale, and advised bathing a few Days: he did so, and found as his strength recovered so his pains lessened. He removed afterwards to *Paris*, where he enjoyed his health and a quiet mind, till one night, upon change of Lodgings, he was bitten with Musketoos, and seeing his Face next morning so swelled, he consulted Physicians and Chirurgeons, who would needs persuade him it was venereal, but it proving otherwise, he escaped the grand Course, but was bathed often.

A Woman of about forty six years of Age was commended into my hands. The hairy Scalp on the *os frontis* had been some while ulcerated, and the bone corrupted the compass of a broad Shilling. I laid it open by a circular Incision, and Dressed it up dry. The second day after I took off the Dressings, and saw the Bone full of a loose Flesh arising out of the Cavities. I scraped the Bone, and dressed it up with *unguent. Ægyptiac.* warm, and digested the Lips the while. Having thus exposed the Bone to exfoliate, I began in the internal cure by bleeding and purging, and prosecuted it by salivating her with *Turbith Mineral.* and in the Declination of the Flux I purged her with the bitter Decoction, and finished the Course by a decoct. *sarsæ*, drying Diet and sweating, and in the while exfoliated the *cranium*, and cicatrized the Ulcer.

63. Obferv.
of a Gumma.

A young Woman came to me with an inflamed Tumor upon the *Fibula* of her right Leg; it seemed to have Matter in it, but upon a further enquiry I discovered it a *Gumma*. I applyed an Emplaster *à bolo* to defend it from fluxion, and caused her to be let blood. The next day I purged her with decoct. *senæ*, &c. and prescribed her an anodyne Draught that night. The Day after I Purged her with *extract. nōst. mag. ex calomel.* and the next day sent her 10 grains *Turbith. min.* in a Pill, which vomited her 5 or 6 times. The next day a Clyster was administered, and the 4 Day after *Turbith* again; and so repeated the *Turbith* with Clysters proportionably: and in the interval Purged her sometimes with the bitter Apozeme to avoid Salivating. By this means I resolved the *Gumma*, and perfected the Cure by Diet and Diet-Drink, Sudorificks, &c.

64. Obferv.
of a Gumma
resolved.

A poor Fellow came to me with a Carious Ulcer on the *os frontis*, which had been of a long continuance: the bone was white, yet corroded much, and filled with an *Hypersarcosis*, as most of these sort of Venereal Ulcers are. He was let blood, and purged four or five days with the bitter Decoction, and took every other night *℞. calomel.* After I had thus Purged him, I laid open the Ulcer by a circular abscision, and dressed it up dry. The second Day I opened it again, and scraped the bone and loose Flesh off, and applyed Dressings pressed

65. Obferv.
of an Ulcer, with
Caries of
the *os frontis*.

out

out of the Tincture of Vitriol, and dressed up the recent Lips with the digestive, *ex terebinth. cum vitello ovi.* After I had thus digested the Ulcer, and disposed the Bone to exfoliation, I raised a Salivation by a few Doses of *turbith minerale.* during which, his Landlady discovering his Disease, would not permit him to lodge longer in her House. Whereupon he removed, unknown to me, to a common Ale-house some distance off. Walking thither in a cold winter day to a Lodging as cold, the Salivation check'd, and a shortness of Breath with frequent fainting followed, and increasing upon him, he died in spight of my Endeavours, and those I consulted.

66. Obser.
of a Caries
in the Os
frontis.

A Man aged forty four years, of a Plethorick Body, half a year after he had been cured of a Chancre, began to complain of a pain in the fore-part of his Head. A Tumor appearing in that part some time after, he consulted a Chirurgion, who opened it by incision, and dressed it with a Dossil of Lint, and left him to his Chirurgion to cure: But in progress of time the Ulcer enlarging and the Bone growing more carious, the Patient consulted another Chirurgion, who told him it was the work of Nature, and that in time the Bone would cast off. The poor Man believing what was said, took care to have it dressed accordingly by the same young Chirurgion, till the *Caries* had infected the Bone almost the whole length from the Coronal suture to the Brows. And then he came to me for Cure, and having lodged himself near me, I went to dress him, and saw a great discharge of a fetid Matter, and the Lips of the Ulcer lying hollow over the rotten Bone. I cut them off round so far as the Bone lay carious under them, then dressed up the Wound and Bone with Dossils of dry Lint, &c. Then knowing that there was no hopes of curing him without the use of Antivenereals, I ordered a Clyster that Evening, and began the next Morning to purge him with an infusion of *sena rhab.* &c. (for I had permitted him to bleed sufficiently in the extirpation of callous Lips.) The third day I renewed dressing, and saw a pulsation of the *dura mater* through several small Apertures in the carious Bone. Upon sight whereof I had thoughts of setting on a Trepan, but there being no immediate danger, I proceeded with Mercurials, and gave him *℞. calomel.* that night, and purged it off the next morning with a Draught of the bitter Decoction, and repeated the same Apozeme four or five days, giving him *calomel.* every other night. Whilst I was purging him the Matter abounded much, and flowed downwards into a remaining *sinus* between his brows; to prevent which, I made a Bandage with good compression on that part, and dressed the rotten Bone with Dossils pressed out of *sp. vini,* and continued that method of Dressing daily. And that I might hasten the exfoliation and cure of this Ulcer, I gave him the morning after *Turb. min. gr. xij.* which both vomited and purged him. I repeated it once in two or three days, till I had raised a Salivation, during which the sinuous Ulcer healed by agglutination, and the Matter accordingly lessened daily, and lost its fetid smell; the Bone also cast off in its circumference, and loosened in the middle, so that I brake those forementioned Apertures into one another, and raised up one piece of the *cranium* consisting of both Tables, and made way for the callus to thrust off the remaining sides of the Bone, part whereof cast off soon after, and the Ulcer incarned, and is now cicatrizing. There was a Node upon the right Jaw, which is partly resolved. The Patient is yet in a course of Diet-drink, sweating and purging, in order to the confirmation of the Cure, which I think there is no doubt of.

67. Obser.
of Ulcers
and Nodes,
with the
ill consequence.

A Man of about thirty four years of Age was commended to my care. He had several Nodes on his Legs and Arms, one whereof upon his right Leg was big and much inflamed. He had also some breakings out about several parts of his Body, and *Caries* in both his Jaws. He had passed through many hands and came then out of a Salivation raised by some Mercurial Pill, and (as he said) had spit be-

between 4 and 5 quarts a day the space of three Weeks. I designed Salivation by unction. In preparation thereto I let him blood, purged and bathed him, then caused his Legs and-Arms to be anointed till his Chaps swelled, and the Salivation arose moderately; then I put him to the Drinking Posset-Ale and Broth, and took care of his Mouth. All things thus likely to succeed well, I having a Command to make a Journey of 4 or 5 Days into the Country, recommended him into careful hands, purposing at my return to raise the Salivation higher, if there were occasion. About the sixth Day after, at my return, I found my Patient much indisposed with a shortness of breath, and frequent fainting. The swelling in his Face was sunk, yet was his Mouth much Ulcerated, and his Jaws so contracted, that he could scarce open them to take in a Spoonful of Broth. His spitting checked, his Body costive, and the Urine he made little and high-coloured. I caused a Clyster presently to be administered, and sent for a quart of *aq. antisypb.* of which I gave him some, and advised the taking it once in two or three hours. I syringed his Mouth with *decoct. hordei, liquiritiæ, & mel. magist.* and put a folded rag between his Jaws, which I had before advised his Nurse; but she was one of his chusing, and ignorant in this work.

I also advised him to hold some of the Gargle often in his mouth as hot as he could endure it, and made up a mixture of some *mel. magistralis* with *sp. vitrioli* to dress some other of the Ulcers which required Deterfion. I also prescribed him a Lambitive of *ol. amygd. dul. &c.* to help expectoration. The next day I purged him with a *decoct. tamarind. cassiæ fistul. senæ, &c.* to which was added *syr. de ros. solut. manna, syr. de sp. cervina*, and repeated it the second and third Days. It wrought moderately, and somewhat relieved him. In the washing his Mouth with a Syringe forcibly, I put him upon excreting a great quantity of filthy matter, amongst which there seemed somewhat like that we call purulent. I not imagining whence it should come, indeed never having seen the like, consulted Doct. Denton, who advised me to purge him with *Barnet-water* a Quart or more at a time, with a Spoonful or more of *syr. de spina cervina* in the first Draught, and so to proceed accordingly as it passed. I did so, and observing it to pass both by Urine and stool, I repeated the use of it five or six Days, and the while kept up his strength with good Broths, &c. After I had thus emptied his Bowels, that discharge of Matter ceased, and he recovered. Then I bathed him, and prescribed him medicated Broths, &c. also *decoct. sarsæ*, and kept his Body soluble by lenient Purgatives once in three Days.

By the frequent syringing and gargling his Mouth, and Dressing the Ulcers, I healed that, but by reason of the contraction of his Jaws, the Ulceration and *Caries* increasing upon the old Diseased parts of the Jaws, some of his Teeth dropt out, and at last I was forced to cut the contracted *Callus*, and that way enlarged his Jaws. Whilst these various accidents affected the *Viscera* internally, his Nodes and Pains Discussed, his Skin also was freed of its foulness, and he seemed Perfectly cured; yet to secure him from relapsing, I prevailed with him to continue his Diet-Drink, and to sweat with *antimon. diaphoret.* &c. and to Purge between while. To which purpose I supplied him with Materials, and he retired a few miles out of Town, and prosecuted the Course, and came from thence to Town well fleht, and enjoys a good health to this Day.

A Man aged forty 8 years, having been long Diseased in the Country, and taking much Physick unsuccessfully, was afterwards advised to the *Bath*, whither he went; but those Waters not being suitable for his Disease, he returned to *London* much emaciated, and very sick and weak, and consulted two Physicians and my self. He had Nodes upon his Arms, Hands, and Fingers, and indeed had no use of them. His other Limbs were affected with pain. He had

68. Obser.
of *Luss*
Veneræ,
with complication
of Diseases.

an

an *Ozæna* of an old date, whence several rotten Bones had cast off. His Jaws were also carious. There was small hopes of his recovery, yet we were obliged to attempt it some way, and in order thereto Lodgings were provided for him near me, and we began his Course of Physick with an *infus. senæ rhab. &c.* but his Stomach was so weak that he had of long time nauseated all sorts of sustenance, and vomited this Potion. Upon notice whereof we prescribed him *sal Vitrioli*, and emptied his Stomach of much viscous Flegm. A Clyster was Administred that evening, and we laid him to rest that night with an anodyne Draught. The next morning he was let blood in the Arm, and Purged the Day after with a solution of *manna, crem. tartar.* in a Draught of Posset-Drink, and the next day we bathed him in Water luke-warm: he fainted in it, and was seized with a shortness of breath after he was in Bed, which lasted about an hour; yet we proceeded in the bathing him Daily the space of a week, and relieved him in those Fits with Cordial waters, and kept his Body soluble by Clysters. Having thus prepared him for other Remedies, we prescribed him *Calomel.* but which way soever he took it, he vomited soon after. We then sent a pot of *unguent. Neapolit.* by a Servant, who rub'd part of it on his Arms, Thighs, and Legs, and disposed him afterwards to a breathing Sweat with a Draught of Posset-Drink: Thus he was anointed several Mornings, till his Chaps swelled and his Mouth Ulcerated. Then we took care in washing his Mouth with lenient Decoctions, and nourished him with medicated Broths and Posset-ale, Permitting him sometime to take a little burnt Wine, *aqua the-riacalis mag.* to support his Spirits. By which method he Salivated 26 Days, and was freed of his Pains; the Nodes also resolved, and he recovered the use of his Hands, and the rotten Bones cast off from the *ethmoides*, &c. The Salivation declining, the bitter Apozeme was prescribed him. Decoctions of *sarsa*, with an addition of a little *aqua Mirabilis* was also allowed: But our Patient had been obstinate and ungovernable in the whole course, and was now at last so averse to every thing was Prescribed him, that in truth he neither purged, Drank his Diet-Drink, or sweat as he ought; and through that omission the serous Humors abounded, and began first to swell his Legs, then his Thighs, and somewhat his Belly. His Arms and Hands afterwards swell'd, and at last his Eye-lids and Face, and an Itch brake out over all his Body, which by his rubbing and scratching excoriated the Skin in several parts, and was very vexatious to him. At the first appearance of these anasarcaous Swellings, various Internals were prescribed, but he only took Cordial-waters in which we infused sometimes Purgatives, whereof this following was one: *R. Spec. diamosch, amari ʒij. Aloes ʒj. sp. vini lbj. eliciatur tinctura f. a. capiat cochlear. iij. pro vice, repetend. ad placitum.* Some such like Tincture was also added to *aq. lumbricor.* &c. We having no other way of purging him, the serosity increased and overcoming the natural heat he Dyed.

69. Observation of the Tonsils, *Ozæna* and Nodes.

One of a strong constitution having been Diseased seven years with the various species of this *Lues*, and had passed through many Hands beyond Sea and here, and hath been taken notice of by me in one of the former Observations for his irregularity in that Course of Physick, came to me again within a year after lamentably afflicted with Ulcers in his Tonsils, Palate, and Nose, &c. (I being then imprisoned by the Fanaticks in *Lambeth House*) he consulted others, but came afterwards to me, Desiring my opinion of his Disease, and what hopes I had of restoring those Ulcerated Parts to their former use and shape. The Ulcers in the Tonsils and Nose were large, and accompanied with Inflammations and Tumors, and thereby occasion'd a great difficulty in swallowing his Drink, the most part of it running out at his Nostrils. On the ridge of his Nose was an *herpes exedens* with a caries in that Bone

bone, and upon the left side of his Nostril another, which had penetrated through that Cartilage, and an *Ozena* within had corrupted part of the *ethmoides* and the lower part of the *septum*, insomuch as there only remained the exterior skin to divide the Nostrils, and that being Ulcerated could not defend it self long from being eaten in pieces. He had also some Nodes upon his Legs, but the Ulcers in his Nose were they which threatened the danger, yet there were hopes of curing them if a course were speedily taken. He returned somewhat satisfied, and the next day sent for two eminent Physicians, and procured leave for me of my Keeper to meet them. I represented the condition of the Ulcers to the Physicians, and proposed them the raising a Salivation by unction as the speediest way to prevent the farther erosion. They had no great opinion of Salivating, but did comply with me, and promised the Patient to visit him often during the course.

The Patient had been let blood, and purged by their prescriptions; upon which consideration I prescribed him *℞ Calomel.* in a Spoonful of white bread and milk to take that night, and advised them to bath him the next day; also to repeat the *Calomel.* for some nights, hoping thereby to check the corrosive quality in the Ulcers; and I also advised to repeat his bathing in order to the salivation I intended by the unction. Care was also taken to keep his body soluble by Clysters, or lenient *Bolus's.* I directed one of my Servants to dress the Ulcers, some with lenients, and others with deterfives.

Whilst the Ulcers were thus disposing to Cure, my liberty was procured, and I again attended the Patient; and having prepared all things ready, began to raise the salivation by anointing his Legs, Arms, Shoulders, Spine and Hips, and repeated it daily, and afterwards put him into a warm bed, and disposed him to a breathing sweat, with a draught of butter'd Ale to gratifie his palate. The rest of the day he drank Posset-drink, &c. During the anointing, some of the Lotions were syringed twice or thrice a day in his nostrils. Gargles were also used to wash his Throat, and the Ulcers of the Tonsils and *uvula* touched with *lac sublimati.* Those Ulcers without were deterged and smoothed fit to heal, as Nature should be disposed thereto. And that little bit of skin which served to divide the nostrils likewise healed.

I continued anointing this Patient till I had wasted near three pounds and a half of the unction, yet his Chaps would not swell, nor did he spit a quart in 24 hours. But during this anointing he was freed of his pains, and the Ulcers cured as well as I could desire. But how far this would serve to eradicate such an inveterate *Lues*, I much Doubted. The Physicians seemed also to distrust my undertaking, considering I did not Salivate him as I had proposed. The Patient also became weary of the frequent anointing. Upon which considerations I was somewhat troubled, and endeavoured by Clysters to move it downwards, wishing it would end in a *Diarrhæa*; but it not moving that way, nor any other way disturbing him, I concluded his not Salivating to proceed from the quantity of Mercury he had formerly taken, and that possibly it was become habitual to him. Supposing it might be so, I caused some Mercurial Emplasters to be applyed to his Feet, Legs and Arms, and sweat him again in his Bed moderately. And after these, seeing the Salivation not yet arise, I gave him *Turbith min. gr. xvj.* in a Pill with *conf. boraginis.* It vomited him twice or thrice inconsiderably. But from that time he began to be feavourish and faint, and the matter much indisposed, by which I judged it necessary to purge off. To which purpose a Clyster was administred, and the Plasters taken off, and fresh linen put on. He took the bitter Decoction 5 or 6 days, making large evacuation that way. During which his mouth was frequently washed, and disposed to Cure; and I put him into a decoct. *sarsæ*, and strict diet, sweating him with *antimon.*

diaphoret., &c. as before hath been prescribed in such like cases. I continued him a month in this Course, and being then satisfied that he was well Cured, and secured from further relapse, the Physicians were sent for, and saw the several Ulcers cicatrized; that on the ridg of his Nose where the bone had been bare, was healed smooth without any visible exfoliation. If the Cartilage on the side of the Nostril did exfoliate, it was cast off into the Nostril, for the cicatrix lay close and transverse as a small seam. Within his Nose there was a great vacuity, but nothing of *Caries* or bare bone, nor did he blow any thing of filth as formerly he had done. And that his Palate and Tonfils were as well, appeared both by his voice, eating and drinking. His Legs were also as free from Nodes as pains. The Physicians judged him Cured, yet would not yield the Cure to the Salivation: but in other cases of that kind, where I afterward proposed Salivation, they would reply upon me, that I did not Salivate such a one, meaning this Patient: To which I always answered, the Cure consists not so much in the spitting a great quantity, as in putting the matter upon such a ferment as might fit it to be carried off by the Sudorificks, Purging, &c.

This Person retired afterwards into the Country, and returned to *London* at the end of two years, and acknowledged to me his Cure by setting Thirty Pounds a year upon me during his Life, and paid me Sixty Pounds for the two years passed.

I am not ignorant that there are a people who pretend to Cure all the fore-mentioned Species of *Lues Venerea* without running such long Courses, or keeping their Chamber: But it is their undertakings which make us so much work; yet truly, I do believe, that all those who are of a fleshy and strong Constitution, may be Cured without Salivating by Uction, if they would patiently submit to so strict a Course of Diet, &c. as that way requireth.

CHAP. V.

OF GONORRHOEA.

Gonorrhœa in General may signifie any Flux of Seed from the body; but custom hath appropriated it to that which is involuntary. *Gonorrhœa*
what it is.

The Ancients have confined that appellation to a loss of Seed which happens without erection or *tentigo*; or if you will have it in *Celsus* his Words, *sine venere vel nocturnis imaginibus*. But Moderns have given a larger Account of *Gonorrhœa*, and do find many Differences of it.

As *First*, That which comes from a fault of the Vessels; as *first*, from natural coldness or great refrigeration, in which case they lose their retentive faculty; or *secondly*, which is more frequent, from friction and masturbation among young boys (when they come to puberty;) *thirdly*, from violent straining; *fourthly*, from the laxity of the seminal vessels in general; *fifthly*, from erosion of the caruncle in the *urethra* which covereth the exit of the *vesiculæ seminales*, and *vasa deferentia*, and is indeed the sphincture of them; *sixthly*, in epileptick cases we find *profluvia seminis*, which seem to be caused by the strength of the Convulsion. Its differences.
1.

Secondly, That which cometh from fault in the matter of the Seed, viz. 1. when it is too crude, thin and cold, and so weeps away insensibly; 2. when it is sharp and comes away either with titillation or pain; sometime to the erosion of the *Urethra* and the excoriation of it; 3. when it is infected with a virulency in the *Lues Venerea*. 2.

It is this latter *species* that is the most usual employment of our profession, the diseases of those parts being most frequently gotten by the two predominant vice of the Age. I shall therefore confine my discourse to that subject, not only because it is one of the first symptoms of the *Lues Venerea*, but also for that through the Patients slighting and neglecting its cure, many ill accidents do happen in process of time, which renders it much more difficult to cure than any other *species* of the Pox.

A virulent Gonorrhœa is an involuntary emission of seed, occasioned by venom contracted from an unclean Woman. Definition.

Seed thus emitted is doubly peccant, both in *quantity* and *quality*. The latter is always proportionable to the degree of the infection and to the encrease of Putrefaction.

The *quantity* is likewise always far greater than the vessels in their natural estate are able to breed or to discharge, which hath caused a great deal of contention among Physicians about the seat of this disease, or the original of it. And indeed it is very odd to consider that a man upon coition shall sometimes have nothing outward appear upon him, either by way of chancre, *bubo*, or any other evil, but shall find his urine hot, with a flux of sharp and acrimonious seed from within, the continuance of which shall spend his strength, erode

the *Urethra*, make caruncles and other mischeifs. On the contrary, if stopped, shall cause inflammations in the Testicles, or else a *Bubo* or Chancre; and if these happen not, shall infect the whole body, breaking out in Scabs and Ulcers, or making nodes, intolerable pains, rotting the Bones, &c.

Where this venom should enter, what it should Originally infect, and how insinuate it self, and afterwards cause such great separations of spermatick matter, &c. is worth our while to enquire.

The way of its entrance in a Woman is intelligible enough, but in a Man it can be no other than either the passage of the *Urethra*, or the pores of the skin of the *penis*, *pubes* and *inguina*.

Manner of
contract-
ing it, 1.
In Men.

The former seemeth not very likely, because it is not suitable to many other circumstances of the Disease, which doth seldom or never originally infect the *Urethra* it self, or the *prostate*, &c. and never ascends into the bladder; whereas on the other side we find visible affections of the *glans*, *præputium*, *inguina*, &c. to be the first effects of the infection.

We have therefore reason to believe that the Venom lurking in the *vagina uteri* of an infected Woman, doth upon the friction and warmth that happens in coition fasten upon those parts which it toucheth, viz. If it lie high within the *vagina*, or the *penis* enter not far in coition, the *glans* and prepuce suffer to the production of a Chancre. If the coition were closer, and the Venom have possessed the *labia pudendi*, then the whole skin of the *penis* is infected, and the *Pubes* it self; where insinuating into those pores, it doth not produce so visible effects as it doth in the prepuce and *glans*, because the skin is thicker. But then it is Transmitted not only into the mass of blood in general, but also into the spongy glandules of the *inguina* in particular. If these or either of these be sufficiently swelled, and nature strong, the Venom may discharge here; but if this happen not, then it creeps into the blood, and there produceth fermentations suitable to its nature. The matter of the Venom being originally corrupted seed, doth therefore raise seminal fermentations, but withal one that is peccant after the nature of the Venom that excited it; by which means it happens that spermatick matter of a vitious sort abounds in the blood, exhausts it of its best spirits, and derives the flower of it to the seminal vessels. This matter is too much and too sharp to be long continued there, where it immediately provokes and stimulates Nature to an excretion; and according to the degree of its acrimony and corruption the seed will be more or less, thicker or thinner, white, yellow, green, &c.

I know *Bartholinus* hath made a *Gonorrhœa* to be nothing else, but an Ulcer of the *prostate*. Which opinion is sufficiently confuted by Doctor *Wharton*, who gives him the insoluble objection of the Tumour of the Testicles, which happeneth always upon the untimely stopping of it. By the pounding up of the water, it is easie to find which way the current came.

2. In Wo-
men.

In Women, the manner of the Infection is much more intelligible. Where the Infection of a corrupt venomous Seed enters into an *Uterus*, that is heated partly by coition, and partly by its own appetite, it is greedily sucked in, and as fatally to the misfortune of the Woman. There its first attack is upon the innermost or glandulous membrane of the Womb, usually acuating its ferment, and causing a large precipitation of *serum* from the blood. This is at first by modest Women mistaken for a *fluor albus* (unless the matter have been so highly virulent as to cause immediate inflammations) and is so treated till worse Symptoms arise, and all is betrayed. What those are, we have already shewed you in part, and more will appear hereafter.

Signs of it
in Men,

The preceeding sign of it is heat in Urine, then succeedeth the Disease it self, viz. an issuing of white matter in small quantity, which by degrees increaseth, and

and groweth more corrupt and virulent, changing its colour somewhat to a yellow or green: and about this time it is accompanied with a painful erection, and for the most part with a contraction or pricking in the *Urethra* under the *frænum*.

In Women also heat of Urine is felt with a Dropping of matter from the Womb, at first resembling a *fluor albus*, but after a few Days it increaseth, and becometh purulent and fetid, with diversity of colours, making an inflammation with excoriation; also a bearing down of those parts, and Pain in the back.

A *Gonorrhœa* is more or less difficult of Cure, according to the malignity from which it receiveth its Original. Those that become suddenly virulent, and accompanied with *stranguria*, are most difficult to Cure. If they do stop without any manifest cause, either a Chancre ariseth, or a *hernia humoralis*. If the Cure be slubber'd over, or long Delayed, caruncles arise in the *Urethra*, and in progress of time a carnosity, &c.

In the Cure of this Disease, we ought to have a special regard to the accidents above-mentioned, viz. inflammation, excoriation, *stranguria*, &c. Therefore in the first place, we endeavour to temperate the heat, then purge off the vicious humours: afterwards by moderate detergents and desiccants cleanse and dry the Diseased parts, and restore them to their natural Temper.

In order to the temperating of the heat, and acrimony of the humours, a cooling and moistening diet ought to be prescribed, viz. Broths of Mutton, Veal, Chicken, &c. wherein may be boiled Endive, Lettice, Purslane, Sorrel, &c. Barley-cream, Grewels, Panadoes are also proper during the pains. Their Drink ought to be Pisans, Emulsions, Juleps, or medicated Ale: a small Ale, or white Wine diluted with water may also be permitted.

All exercise of the Body is prejudicial to their healths, and consequently their rambling abroad prolongs their Cure.

A quiet mind, with a patient submission to their Physician and Chirurgion is also required: and that they forbear Venery, as they value their own and their Mistress's healths.

The Evacuation may begin with a Clyster of the common Decoction *cam ele-ctuario lenitivo. ʒij. butyri recentis & ol. amygdal. an. ʒiʒ. cum vitel. ovi.* You may afterwards let them bleed in the Arm, if you judge it necessary. Then purge them with *elect. diacathol. diaphrun. solut. diacassia cum manna*, or with a Decoction *castæ fistulæ, tamarind. hord. mundat. liquirit. florum trium cordial.* to which may be added *manna, syr. ros. solut. &c.*

After purging, it will be necessary to dispose the humours to quiet by some anodyne Draught: Emulsions are also Proper during the whole Course. Of which sort this may be an Example. *Rx sem. canabini ʒiʒ sem. quat. frig. maj. an. ʒj. sem. papaver. abl. ʒij. amygd. dulc. excort. n. 16. decoct. hordei q. s. fiat emulsio; dulcoretur cum sacchar. albis. aromatizetur cum aqua cinnamomi: sumat ʒvj. hora somni, repetatur ad libitum.*

If the heat of Urine, and other accidents increase, it may be necessary to give ʒj. calomel. in a bolus, with some of the forementioned Electuaries, and to repeat it as you see cause once in two or three Days.

If by these the accidents do not remit, bath them in a *semicupium*, with an emollient Decoction, or milk and water, and to prevent erosion in the *Urethra*, inject *decoctum hordei*, wherein hath been boiled *sem. althææ, cydonior.* or some of the lesser cold seeds; and if you will, you may anoint those external parts with *unguent. refrigerat. Galeni.* But do not insist too long in the use of lenitives, lest a Chancre arise; but purge off those vicious humours with *pul. cornichini, pil. cochiæ, Rudii, pulver. diagridii, troch. Albandal, &c.* with or without

out *calomel.* and if there be required strong revulsion, vomit them with *infus. croc. metallor. mer. vitæ*, or with a few grains of *Turbith minerale*.

The virulency thus removed, the use of Turpentine comes in request to deterge and heal, which would not be so reasonably admitted sooner, lest through its heat and tenuity of parts it lead down the impure matter, and burthen the diseased parts. It may be given to the quantity of a Drachm, 2 or 3, washed in *aq. plantag. parietariæ, &c.* adding a few grains of *camphire* to it; or you may add purgatives to it, viz. *pul. rad. jalapii, trochisci Albandal. diagridii, &c.* Or *R. terebinth. lot. in aq. plantag. 3j. acidi tartari ʒj. corn. cervi usti. ocul. cancror. diagridii an. ʒß. f. Bolus*: Or *R. terebinth. Venet. lot. in aq. ros. rub. 3ij. tartaria vitriolati 3ß. salis succini, rhab. pul. an. ʒß. cum pul. glycyrrhiz. f. Bolus*. And in its more decrease: *R. salis prunellæ 3iij. crem. tartari 3vj. camphoræ ʒj. terebinth. Cypræ. 3ijß. sumat ad quant. castancæ manæ & vesperi*. In case of relapse, add *pul. rad. jalapii* to it.

At this time, Clysters of *terebinth.* are proper, which in the time of its virulency would be mischievous.

If by some of the foresaid Medicaments, the *Gonorrhœa* be not perfectly cured, you may prescribe astringents. The time of giving them is in the very declination of it, when there only appeareth a little thin waterish humour which glueth the entrance of the *urethra*. If you give them sooner, you may stifle in the matter, and raise a *hernia humoralis*. The astringents usually prescribed are, *Bol. armen. sang. dracon. mastich. cerv. cern. usti. os. sepia, croc. mart. astringentis, troch. alkekengi, &c.* made into Pills: viz. *R. succin. mastichis an 3ij. sang. dracon. lap. hæmatit. coral. rub. an. 3j. balauft. sem. plantag. an. 3jß. croci martis astring. 3j. pulveriz. omnia. & cum bals. Peruviano & syr. cydon. f. massa pilul. dos. 3ß ad 3j.* After which the Patient may drink a draught of the following decoction: *R. folior. polygon. millefolii an. Mj. rad. althææ, nymphææ, an. 3j. flor. ros. rub. papaver. rhead. an. Pj. sem. quat. frig. maj. an. 3iij. sem. plant. portulac. lactucæ. an 3j. sem. hyoscyam. papaver. albi an. 3iv. baccar. myrt. sumach. sem. balicacabi an. 3ij. f. decoctio. in f. q. aq. fontis; colaturæ adde syr. cydon. de ros. siccis.*

I. Obser-
vation of
Gonorrhœa

If after the *Gonorrhœa* be cured, you suspect you have not enough secured the Patient from the malignity of the disease, you may purge him with some of the forementioned Catharticks with *Calomel.* after which you may proceed with Sudorificks; as hath been shewed in the former Observation.

One came to me, complaining of a heat in his Urine, with a suspicion of a *Gonorrhœa*, contracted as he supposed the night before. Upon view of the *penis* there appeared a redness on the end of the *glans* and he crused out a moisture like matter. I concluded it a *Gonorrhœa* began the cure without delay. In the first place I let him blood, and some hours after administered a Clyster. I prescribed him that night a barley-cream for his supper, and in the morning Purged him with *manna* and *cremor tartar.* in Whey. The next morning the *Gonorrhœa* appeared visibly, and his Linen was much stained with the matter. We repeated the hordeat that night, and prescribed him ʒj. *calomel. conf. cichor. 3ß. ms.* which he took early in the morning, and about three hours after a draught of the *decoct. tamarindor, &c.* as it is prescribed in the Method of Cure, and some hours after that Drank so much more of the Decoction, by which he was well purged. That night I laid him to rest with an anodyne draught. The next morning I found the *Gonorrhœa* increase with heat in Urine and painful erections. I repeated the former Apozeme, and to prevent erosion I injected the *decoct. bordei*, as is above mentioned. and repeated at night the anodyne draught: but finding the accidents still to encrease I prescribed him the morning after *calomel. gr. 15. turbith. gr. 6.* with *conf. ros.*

in

in a *Bolus*, with a draught of Posset-drink after it: and in case he vomited, to drink Posset-ale after each vomit. But he had formerly taken much Mercury, and this Dose moved him little. A Clyster was administred that afternoon, and at night an emulsion *ex sem. canabin. &c.* which he had liberty to drink as often as he pleased in the night. The second day after I repeated *turbith min.* The next morning I perceived a remission of pain, &c. which I imputed to the mercurial dose, and would gladly have repeated somewhat of that kind: but to avoid fluxing I purged him the next day with *pul. chorichini*; it worked plentifully. I repeated it again the next day with *℞. calomel.* and at night he drank the emulsion as before. Thus the virulency and accidents were checked. From that time I purged him with that Electuary of *sal. prunel. cum teribinth.* but observing it to run again, I added *pul. jalapii* to it; and by the repeating that, and afterwards the same Electuary as it is prescribed without Jalap, I cured the *Gonorrhœa*.

I was sent for to a man grievously afflicted with a *Stranguria*. He had been let blood and purged with lenients; he had also drank emulsions, and bathed often in a *semicupium*, but without remission of pain. Upon this information, and assurance that he had not the Stone, I suspected it might arise from some *Gonorrhœa* suppressed, but he would by no means acknowledge that. However I gave him early next morning *℞. calomel. cum conf. cichorei* in a *bolus*, and a Clyster that afternoon. It gave him three or four stools. That night I prescribed a draught of emulsion. The next morning I found him much relieved. I gave him alternately two doses more as at first, with Clysters in the afternoons, and continued the use of emulsions, and thereby freed him of the *Stranguria*. About 2 or 3 days after he came to me, and shewed me a *Gonorrhœa* weeping. It had been too soon stopt by astringents, and that caused the *Stranguria*, which now returned again, but with no great malignity. I purged him with the Electuary *ex terebinth. sal. prunellæ cum pul. jalapii*, and afterwards I confirmed the Cure with the same Electuary *sine jalapio*, and the *decoct. millefolii*, &c. casting up an injection at last of a solution of *mel. Ægyptiac. in aqua equiseti*: by all which he was Cured.

One came to me diseased with an involuntary effusion of matter; it seemed to me a Venereal *Gonorrhœa*, but he having consulted others who thought it arose from some scorbutical affection, I advised him to put himself into their hands, my knowledg extending only to the Cure of the venereal one: and supposing it to be so, yet I could not hope to cure it in so few Days as they had promised him. Thus we parted, but after a longer tryal with them than was promised, he returned to me again not better than at first. Upon which consideration I undertook to serve him as well as I could. He had been sufficiently treated with lenient purgatives. I began with a Dose of *pul. cornichini*, which purged him at least 15 or 16 times. That night I disposed him to rest with an anodyne Draught. The next day he was less pained in making Urine, and the running was lessened. Upon which account I purged him more moderately, but that way of lenient purging gave way to the increase of the virulency; which being also observed by the Patient, I purged him with more large Doses, and those of the stronger Catharticks, *viz. pil. Rudii* with *calomel.* and sometimes with *pul. cornichini*, or the Electuary *ex terebinth. cum jalapio*. By the use of this last I purged off the *Gonorrhœa*, and stopt the running by some few Doses of *pil. croci martis astringentis*. He continued well about a month, then it relapsed again. Upon sight whereof I repeated the former course, and stopt it; yet it brake out afterwards seven times for the space almost of a Year. I cured it as often, by purging him with the Electuary *cum jalapio*, so that it continued well at last. Whether it was venereal at first, I cannot

cannot affirm: Nay so far as I could judge by his habit of body and manner of living, he was not that way inclined; but what way soever it proceeded, he was perfectly cured and continueth so.

4. Obser-
vation.

I was commended to a Patient who lay much afflicted with a virulent *Gonorrhœa* accompanied with the severest accidents, viz. *Priapismus* with contraction of the penis, *stranguria*, &c. insomuch that he was necessitated to rise often in a night to cool himself. He had been in such hands as had purged him and let him blood. I began with a Clyster, and the next morning gave him a Lenitive Electuary, *diaprun.* &c. with the Addition of *calomel.* and bathed him that day, and prescribed him Emulsions, and prosecuted the foresaid method of bathing and purging 4 or 5 days with little remission of the accidents. Wherefore I left off bathing, and prescribed him gr. iij. *mer. vitæ* in a pill, which vomited him much and purged him. I disposed the patient to rest the following night with gr. jß. *Laudan. aq. cinnam. hordeat. aq. & papaver, cum syr. paralyseos.* The next morning I prescribed him an emulsion made with Chicken broth, as well to nourish him as temperate the acrimony. I also repeated emollient Clysters, such as have been set down in the Method of Cure. Having thus somewhat refreshed him, I prescribed him *calomel.* ʒi. *turbith min.* gr. iv. which vomited him twice that day. I kept him to Chicken-broth and Clysters, and at length repeating these Mercurials, I freed him of all those accidents; and with the white Electuary *ex terebinth. cum pul. jalapii* I purged off the *Gonorrhœa*, and with the other *ex terebinth.* the astringent Pills, and decoct. *lig. lentiscini cum rad. bistortæ, consolid. tormentillæ, &c.* I concluded the Cure. This very man was the most severely afflicted with the foresaid *Gonorrhœa* I ever saw: yet some years after he was again clapt, and passed under several hands till the Malignity spread it self all over his head, face and body, and was at last Cured by me.

5. Obser-
vation of
Gonorrhœa
with
Chancre.

One of about 30 years of age of a full body, came to Town diseased with Caruncles, intending to be my Patient; but within a day or two he came to me with a recent *Gonorrhœa* contracted the night before. I began the Cure that very instant by letting him blood, and prescribed a Clyster that afternoon, and prosecuted the course by emulsions and purging. But the Patient being irregular, the *Gonorrhœa* became highly virulent with all the accidents of pain, &c. and whilst he was purging with *pul. cornichini* and *calomel.* a Chancre appeared between the Prepuce and Glans very big and hard. He pretended it rose that night. I gave him the next morning a Dose of *turbith min.* which vomited him 5 or 6 times, and purged him twice. I dressed the Chancre with a Pledgit dipt in *lac sublimati.* I repeated the *Turbith* the third day, and afterward again till I salivated him, I thinking that way the most speedy in such Libertines. During his salivation an Artery among the great Teeth on the right Jaw burst forth, and bled very much before I had notice of it: I stopped it by directing him to hold the yolk of a hard roasted Egg between his Jaws close upon the place where I suspected the Artery to lye, and so by compression restrained the bleeding. The next day I set him in a clear light, and discovered the blood to arise by a carious tooth which I stopped with Lint dipt in *ol. vitriol.* so that it bled no more. During the Salivation the Chancre resolved and the *Gonorrhœa* stopped. In the declination of the Salivation I purged him with the bitter Apozeme, and afterwards finished the Course with decoct. *sarsa, &c.* sweating him. Whilst he was in this course of sweating, the *Gonorrhœa* appeared again weeping, but the malignity being wasted, I cured it with the white Electuary, and astringent Pills.

6. Obser-
vation of a
Gonorrhœa
with
Chancre.

One of about twenty three years of Age came to me with a *Gonorrhœa*, accompanied with Virulency. I advised him a Clyster that Evening, and the next

next morning let him blood, and prescribed him a laxative ptisan (as it is set down in the method of Cure) to purge him moderately, which he took and repeated three or four days, taking ʒj. *Calomel.* every other night. During which I prescribed a lenient injection of *summitat. malvar. violar.* decocted in *aq. hordei.* Those accidents of Pain thus mitigated, I purged him with *pul. cornichini* and *calomel.* and after its operation, I prescribed him an emulsion *ex sem. canabini,* &c. and repeated the use of the Purgative and Emulsion, till I had taken off the virulency. Then I sent him a Pot of the white Electuary *ex terebinth. jalap, &c.* and a draught of the Emulsion after it each night. During this Course, the Patient supposing himself secure, took his liberty abroad in eating and drinking, till a great Inflammation happened on the prepuce, with a swelling and excoriation of the *glans,* also a large Chancre between the prepuce and *glans:* Upon sight thereof I let him blood, and fomented the prepuce with *decoct. summitat. rubi, plantag. &c.* and dressed him up as is usual in such Cases, and gave him ʒij. of *manna* with *crem. tartar.* next day in a draught of Posset-drink. It purged him seven or eight times. The second day after I prescribed him a Dose of *turbith.* and a Clyster that afternoon, and afterward proceeded in the repeating *turbith. min.* and raised light Salivation, by which the hardness was resolved, and the Chancre Cured. After which he drank a *decoct. Sarsæ,* and observed a strict Diet, and Sweat, as hath been said in the like cases. After I had thus Cured him, a weeping of the *Gonorrhœa* appeared again; it was no more than I expected, it commonly following after such courses of Physick: but there being no malignity in it, the Cure was soon effected with that white Electuary *cum terebinth, &c.* and he continued well.

7. Observation.

A young Woman newly married, complained the second day after of a heat in her Urine, which encreasing upon her with a *fluor albus,* I was sent for, and heard her complaints, and saw some linen she had worn, much stained with matter. I advised her to bath the excoriated parts with milk and water, and to dress them with *unguent. refrigerant. Galeni,* prescribed her an emollient Clyster, Emulsions, &c. and took my leave without discovering to her the nature of her disease. A day or two after, I took an opportunity to acquaint her Husband with what I had observed of his Wife's condition, and questioned his health. After a little demur, he told me, he had some months passed a *Gonorrhœa,* and supposed he had been Cured but of late, since the complaint of his Wife, he had observed some little weeping, and shewed me somewhat like the reliques of a *Gonorrhœa.* It was inconsiderable, yet seemed enough to infect her. He put himself into my hands, and recommended her also to my Care. I let them both blood, and purged her with a laxative ptisan of *Cassia, tamarind, &c.* and sent her an injection of a solution of *lap. medicam. Crollii* in *qa. plantag.* a dram to a pint, and continued the use of Emulsions, and afterwards bathed her some days in a *semicupium,* and kept her body soluble with lenitive Bolus's, to which I added 10 or 12 grains of *precipitat. alb.* After I had thus contempered the heat, and healed the external excoriations, I purged her with *diagridium* and *precipitatus alb.* some days, increasing the one or other, and sent her *decoct. summitat. rub. equiset. plantag. &c.* with a solution of *unguent. Egyptiac.* these parts requiring powerful dryers. After I had thus purged off the malignity, I prescribed her the purging Bolus of *terebinth. cum pul. jalap.* and afterwards confirmed the Cure with astringents, as in the method of Cure hath been set down. Her Husband was cured by purging with the aforesaid Electuary.

They have both enjoyed their healths well since, and have Children.

Whilst I was Curing one of a *Gonorrhœa* by purging, &c. and thought I had 8. Observation.
Cured him, a Tumour rose in the left Testicle. Upon complaint of it I sent

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for

for a Truss, and the while let him bleed in the Arm, and made up a Cataplasm of *far. bordei* & *fabar.* with *oxycrate, mel. commune,* and applyed it. That afternoon a Clyster was administred, and the use of the Cataplasm was repeated twice a day; during which he was purged with *diagridium* and *calomel.* by the help whereof the Tumour in the Testicle diminished daily, but by the sharpness of the *acetum* the *scrotum* was heated and blistered in several parts. Upon sight whereof I directed some Vinegar to be prepared with Litharge, and made up a Cataplasm with it instead of the Oxycrate, and applyed that, defending the vesication with pledgets of *unguent. album.* By this Cataplasm the humour was dried up, and the Testicle restored to its natural tone; but the *Gonorrhæa* discovering it self in the mean time, I purged it off as abovesaid, and concluded the Cure with the white Electuary and astringent Pills: the Patient drinking a draught of *decoct. lig. guaiaci, lentisci, &c.* after it.

9. Observation

One about eighteen years of Age was afflicted with a swelling in his right Testicle with inflammation and hardness. I supposed it Venereal and risen from a suppression of a *Gonorrhæa*, but he denied it. I let him bleed, and sent for a Bag-truss, and the while prescribed a Cataplasm *ex farin. bord. & fabar. an. 3vj. pul. summitat. absinth. flor. sambuci & chamemeli* decocted in *oxymel*: It was applyed, and retained close on by a Bag-truss. By the application of this Cataplasm a few days the Tumour was removed, and restored to its natural state, but before this Tumour was quite resolved, I took occasion to look upon the *Penis* and saw it running; yet the Patient persisted in the denying it; but before I prescribed him ought in order to the Cure, it was more demonstrable, and he acknowledged it. I purged him with *extract. Rudii & calomel,* four or five days, and afterwards with that Electuary *ex terebinth. cum jalapio,* by which I purged off the venomous matter, and with Clysters of *terebinth.* and astringent Pills, I cured him.

10. Observation.

A young Fellow was brought to me, having a great inflammation and swelling in his right Testicle; he acknowledged that it arose upon the Cure of a *Gonorrhæa*. I let him bleed, and sent for a Bag-truss, and the while prescribed an Anodyne Cataplasm *ex foliis hyoscyami* decocted *cum. pul. flor. ros. rub. croco, axung. porcin. medull. panis tritic. cum vitell. ovor.* which was applyed and kept on with a Truss. The next day a Clyster was administred, and the dressing repeated. The day after he was purged with ʒj. of *calomel.* in a lenitive Bolus. We continued the application of the Cataplasm till the inflammation and pain relaxed. Then made up a Cataplasm *ex farin. fabar. bord. &c.* as in the former Observation; and from that time I purged him with *pil. cochiae. min. & calomel.* and supplied him with a Box of the small Pills, and a Pot of that Cataplasm to dress himself: and he finding himself well mended, removed to his former lodging, and rambled about his affairs. Fifteen or sixteen days after, when I thought he had been Cured, he came to me with a Callous Chancre on one side between the *glans* and *frenum,* the Tumour in *scroto* being resolved. I confined him again to his lodging, and purging him daily with the foresaid Pills, increasing and decreasing the Mercury or Catharick, till I totally resolved the Chancre. Then with *decoct. guaiaci* and Sudorificks I concluded the Cure.

11. Observation of a *Gonorrhæa*, with *Hernia humoralis.*

A man being diseased with a *Gonorrhæa*, put himself into some hands for Cure, but whether through irregularity in the Patient, or that they were too hasty in the use of astringents, however so it happened, that upon the stopping of the *Gonorrhæa*, a Tumour arose between the Testicles, but it especially affected the left Testicle, and the *perineum* with great inflammation and hardness. I let him bleed and advised a Clyster, and prescribed him a Cataplasm *ex summitat. hyoscyami, althæa. cicutæ. flor. cham. sambuci, sem. lini, &c.* The next day I purged him with *manna & crem. tartar.* in a draught of Posset-drink, and the

the day after prescribed him 12 gr. of *turbith. min.* which vomited and purged him well. By repeating of the same Dose once in three or four days and by the continued application of the Cataplasme, I resolved the Tumours which threatned the welfare of the part; the suppurations in these Tumour commonly leaving an opening into the *Urethra*, which is difficult to agglutinate. After the resolution of the Tumour the *Gonorrhœa* returned. It was Cured by that white Electuary which is purging, and hath *diagridium* in it. During which he drank this following decoction: *R. lig. guaiaci ʒiij. lentisci ʒiij. chinae nodosæ ʒij. sassaf. ʒj. ras. C. C. eboris. an. ʒvj. santal. rubri ʒj. rad. tormentillæ, bistortæ, consolid. maj. Ireos Florent. an ʒjss. passular. maj. enucleatar. ʒiij. lig. cassiæ, calam. aromat. an. ʒiij. liquoritiæ Hispan. ʒj. infundantur, & coquantur in suf. quant. aquæ fontanæ ad lbv iij. colat. adde sacchar. rosat. q. s. ad dulcorandum pro usu.*

A young Fellow having long suffered with a *hernia humoralis*, which had apostemated and broke out on the outside of the right Testicle, and having passed through negligent hands, was at last as an object of charity recommended to me by Dr. *Walter Needham*. I looked upon the Tumour, and made a search into the Ulcer, and informed my self that it was not only sordid but sinuous from the production to the lower part of the Testicle. But he would not acknowledge that it rose from a *Gonorrhœa*, or upon any Venereal account. He was hypochondriack, and importuned me earnestly to cut off both his Testicles. Whether it was in despair of their Cure, or as a punishment for their offence I know not; but he told me, it was to that purpose he came to me. I seeing him so resolute, advised him to come such an hour the next day, and I would prepare for him. He came and persisted in the same resolution to have them both cut off. I having made dressings ready, as for the work began with the ulcerated Testicle, passing my director in the *sinus*, bending it downward, and cut that sinuosity open the whole length, then passed in my Probe-Scissors to the *sinus* upward, and divided that, and by this opening he began to thrug, and being made sensible of the pain, was well contented that I should dress him up, and cure the Testicle. I complied, and dressed up the Ulcer with dossils dipt in precipitate, and applied between the wounded lips *pul. Galeni cum albumine ovi*. But the blood burst forth so forcibly after I had bound it, that I was necessitated to dress it again. I did so with dossils dipt in the Royal Stiptick, and from that instant it bled no more. The second day after I took off the dressings, and seeing the Ulcer sordid, I dressed it with deterfives, and having thereby in few days disposed the Ulcer to Cure, I purged him with *pil. cochiae min. & calomel.* and left the finishing of the Cure to my Servants, who performed it accordingly.

12. Observation of a sinuous Ulcer in the right Testicle.

CHAP. VI.

Of the ill Consequences of a Gonorrhœa Cured.

IN the preceeding Chapter of a *Gonorrhœa*, I shewed you the accidents that Disease is subject to in its recency; I shall now declare to you the sad consequences that attend it in its seeming declension, when it is left imperfectly Cured, and is, as some of those Blades call it, a weeping, only a weeping not worthy the keeping Chamber.

From which neglect of Cure, those seminals from whence the *Gonorrhœa* issued are rendered more lax, and in progress of time the matter fermenteth upon the old Leven, and becometh much more acrid and malign, discharging a matter, as at first in the nature of a *Gonorrhœa*, heating and corroding the *Urethra*,

The Consequences of a *Gonorrhœa*.

from whence Caruncles do frequently arise, and are attended with many ill consequences, of which I shall give you a relation, and begin it with that of a Caruncle.

Caruncles. Caruncles are a sort of loose flesh, arising in the *Urethra* frequently in the time of a *Gonorrhœa*, by reason of the erosion made by that virulent acid matter; but if that *Gonorrhœa* be well treated, the erosion is Cured, and those little grains of flesh dried up. However their growth is then so small, as they are rarely taken notice of till the declining of the *Gonorrhœa*, and then a small weeping with a few rags appearing in the Urine gives the first suspicion of them.

If this matter be not timely dried up, the Caruncles increase, and a difficulty of Urine gradually succeedeth, and it cometh forth forked, or in a small stream dribbling: but this happens in some people not till many years after the *Gonorrhœa*; for they arising from a dry membranous part do grow slowly (and do sometimes waste of themselves, or are wasted off by the Urine) upon which account that trouble in pissing happening sometime many years after a *Gonorrhœa*, gives them occasion to suspect that it ariseth from gravel: and as the Disease increaseth, it is thought the stone, but by a searching Candle a more certain discovery is made, those Caruncles being to it so many rubs in the way.

Carnosity. If at this time their Cure be neglected, some drops of Urine, or in coitu the Seed remaining amongst these Caruncles, heateth the part, and increaseth their growth, and not only renders them Callous, but at length the whole *ductus*, and then it is called a carnosity; which straitning the passage stoppeth the virulent matter in its motion, whereby it is forced back to the Seminals, in which case the Testicles for the most part do suffer: but if it be the *vesiculæ seminales*, or prostates which are oppressed, they inflame, and by adhesion to the neighbouring parts pass their matter that way, sometimes through the tunics of the *Intestinum rectum*, and then the matter is discharged by stool; or it may be, the matter passeth through or near the *podex*, and then it is supposed a *fistula in ano*, and this way the Urine is sometimes discharged with it. These are the Ulcers which render *fistula ani* scandalous. If the matter passeth in *perineo*, for the most part it perforates the *Urethra*, sometimes like a Flute, and the Urine cometh thereout, other times it corrupteth within, and dischargeth the putrefaction into the *pelvis*.

Whilst the *Urethra* is straitned with a carnosity, the Urine is frequently suppressed, and then the bladder endeavouring to disburden it self becomes subject to fluxion, and groweth sometime carnosous, and of a strange preternatural shape, stretching out of the *pelvis*. In the opening such a diseased Body, I saw the bladder adhering close to the upper part of the *os pubis*, and that part of the *peritonæum*. In another there was frequently discharged a matter with the Urine not unlike corrupt Seed.

One riding a Journey was hurt by stumbling of his Horse, and became so indisposed, that he was brought back to Town. Physicians and Chirurgeons were consulted, and supposed him bruised internally. They let him blood, and treated him accordingly, but without success. The day after I was fetched to him, and I found him labouring with great oppression, shortness of breath, fainting, &c. I viewed his body naked, and endeavoured to inform my self of his bruise, but there was no symptom of any. I seeing he was not likely to recover, took my leave, and desired a Servant of the house to give me notice of his death. He died that night, and I went the next morning and opened his Body. All the *Viscera* were sound, and no blood extravasated, but within the *pelvis* I saw a great quantity of purulent matter, like that which issues forth in a *Gonorrhœa*. I divided the *os pubis*, and opened the *pelvis*, and saw near the Prostates a bag broken, which I concluded to be one of the *vesiculæ seminales*.

Upon

Upon search into the *Urethra*, I found he had been long diseased with the Reliques of a *Gonorrhœa*, viz. Caruncles and Carnosity.

The Female Sex do also extremely suffer upon the same account, the corrupt seminal matter frequently excoriating the *puendum*; whence excrescences of all sorts do arise, and the sharp matter dropping from the matrix, frets and ulcerates the external parts of the *labies*, &c. An instance of this sort you may see in some of the following Observations.

The *Vagina uteri* is also sometimes excoriated, and excrescences frequently grow there of great bigness, one whereof I took off very large of the shape of a Mulberry.

In others I have seen the *vagina uteri* much ulcerated, and discharging great quantity of fetid matter with pain and inflammation. The *alp* of the *puendum* of one were gangrened, but I removed that, and cicatrized several of the Ulcers, but one Ulcer within the *Vagina* corroded into the bladder, and a Mortification followed, and put an end to her misery.

Another upon a suppression of that corrupt seminal matter was seized with a *dysuria*: the cause not being discovered, the Kidneys were blamed. The disease increasing to a *stranguria*, a stone in the Bladder was supposed. I was fetched to make a search, but felt none. The accidents of pain, inflammation, &c. increasing, she died. I opened her Body, and saw the Bladder, *vagina uteri*, & *intestinum rectum* all gangrened: The *musculi lumbares*, and those of the *abdomen* looked as if they had been parboiled: The rest of the *viscera* were reasonably sound.

As from a suppression of that malign matter, apostemations do arise between the interior Tunics of the *vagina uteri*, so I have sometimes met with scirrhous Tumours, which I have sometimes palliated by Antivenereals, when they were thought Cancers. All these mischiefs increased to such height through the ignorance in them that treated them.

Thus I have given you an account of the several Symptoms as they arise one upon the neck of another, by which you may distinguish how they differ.

The cause of them is also apparent, that they arise from a *Gonorrhœa* ill managed.

The Signs of Caruncles I have also shewed you are discoverable by a searching Candle, they lying in the way give a stop to the Candle in its motion to the Bladder. Yet let not that make you over confident that there is no Stone in the Bladder, for it frequently happeneth that there is also a Stone therein; therefore you ought to inform your self of the peculiar Symptoms of that Disease before you oppose it. For so also from that Stone a dribbling of the Urine is common, and in case of pain the Urine cometh forth forked and in a small stream. But in Caruncles it cometh forth more forcibly than in those of the Stone, and they make much Urine at a time, and are in ease after they have urined, which doth not happen in the Stone.

A Carnosity hath the same signs that Caruncles have, but the Urine being more straitned by the Carnosity maketh the Symptoms the more severe, Prognostick. inso-
much as there is frequently a pain in the *Glans*, and in straining hard to Urine, there accompanieth it sometimes a *prolapsus ani*, which are especial signs of the Stone in the Bladder. But the preceding *Gonorrhœa* and Symptoms of the Caruncles will sufficiently guide you in making the distinction between them two. To distinguish the Abscesses and Ulcers in *Ano* attending this Disease from those which arise from the Hemorrhoids, the Treatise of *Fistula Ani* will instruct you.

The extirpation of Caruncles is no easie work, and if there be a Carnosity Cure. joyned with it, the Cure is much more difficult. And so accordingly as there
are

are other Symptoms complicated with them, so much more is the Disease rendered deplorable and difficult to cure.

In the Cure of this Disease the same method ought to be observed in Diet which hath been delivered in the cure of a *Gonorrhæa*; also evacuations by Lenient Purgatives: At least you ought to begin with such to prepare the body; as *R. hordei mundati* ℥iij. *rad. graminis, polypod. querc. filicis sem. an.* ℥iv. *scolopendrii utriusque, cichorei, endiviæ cum toto, adiant. hepaticæ an.* Mj. *cort. radic. cappar. mediani fraxini, tamarisci an.* Mß. *passular. ma. enucleat.* ℥iv. *liquiritiæ ras.* ℥j. *sem. anisi, fenic. an.* ℥ß. *coq. in sufficienti quant. aq. font. ad* ℥iij. *colatura calida infund. per noctem fol. senæ* ℥jß. *agarici trochiscati, rhei electi an.* ℥iij. *santali citrini, cinnamomi an.* ℥ij. *f. iterum expressio mediocris, & clarificetur cum succo limon. & gutt. aliquot vitrioli.* In colatura ℥xviii. *dissolve cremoris tartari* ℥iij. *syr. de spina cervina* ℥ij. *syr. ros. pallid.* j. *f. apozema.* With this or such like you may purge them five or six days, and let them bleed if you see cause. Emulsions and contempering Juleps may also be of use to mitigate the heat of Urine. Vomits are also of great use for revulsion, and those of Turbith I have always observed to be most efficacious. All the Antivenereals prescribed in the cure of *Lues Venerea* are proper here, we being indeed often necessitated to salivate by Uction. After which drying Decoctions and Sudorificks are proper as aforesaid, with purging; and after all we conclude the cure with such as have vertue to heal and mortifie the relaxed Seminals, of which sort these following are: *R. Fol. menthæ* Miiij. *millefolii, plantag. equiset. an.* Mij. *sem. 4. frigid. maj. confus.* ℥ij. *sem. plantag. acetosæ, agni casti, canabis, papaver. albi an.* ℥ß. *terebinth. Cypr.* ℥vj. *sacchari albis.* ℥ß. *lactis recent. C. ij. f. distillatio.* *R. Gum. guaiaci* ℥iij. *terebinth. siccata.* ℥ij. *rad. bistortæ, tormentillæ & nymphæ pulv. an.* ℥j. *succini, coral. rub. margarit. lap. Gagati, ocul. & pul. an.* ℥iv. *camphoræ* ℥ß. *terebinth. Cypr. q. s. f. massa pilular. capiat.* ℥ij. *mane & hora somni, superbibendo* ℥iij. *vel. 4. aq. superscriptæ.* Or, *R. rad. tormentillæ, bistorti, symphyt. an.* ℥iij. *succini alb. coral. rub. margarit. eboris, cornu cervi usti an.* ℥j. *gum. guaiaci* ℥ij. *sem. agni casti, canabin. papaver. albi, plantag. acetosæ an.* ℥j. *sem. anisi, fenic. coriand. confect. an.* ℥iij. *f. pulv. sumat.* ℥j. *cum lact.* ℥viii. *mane & vesperi.* *R. Gum. guaiaci nat.* ℥ij. *mastich. benzoin. an.* ℥j. *merc. dul. sexies sublimat.* ℥j. *bragrisiæ* ℥ß. *croci* ℥j. *ol. absinthii gutt.* 6. *aloes rosati ad pondus omnium, & cum sufficienti quant. bals. nat. f. massa pilular. de qua capiat* ℥j. *singul. noctibus in forma pil. iv.* *R. colophonæ ex terebinth. Cypr. in aq. plantag. & ros. rub. ad duritiem coct. mastich. granat. select. an.* ℥ß. *gum. aninæ pellucidissimæ, gum. guaiaci, benzoini, succini albi an.* ℥ij. *unguium albis* ℥j. *bals. Tolutani* ℥jß. *terebinth. è Chio accipienda reliqua, quæ in pulverem subtil. redact. in mortario calido misce, addendo sub finem bragrisiæ* ℥j. *f. massa pil. ex qualibet* ℥j. *formetur pil. iv. & usui reserventur: harum capiat* vj. *quotidie mane & vesperi, superbibendo haust. sequent. decoct.* *R. rad. sarsaparillæ* ℥vj. *cort. ligni sancti* ℥ij. *sassafr. rad. tormentillæ an.* ℥jß. *santali rub. citrini ras. corn. cervin. rhinocerot. flor. anthos an.* ℥ß. *fol. agrimonii* Mij. *thæ chinæ.* Mj. *rad. liquiritiæ* ℥jß. *maceris* ℥ij. *f. omnium infus. & decoct. in aq. font. ℥xij. ad tertie partis consumptionem pro potu ordinario.* These were all prescribed by Sir Fr. Prunjean to several Patients labouring of these Diseases under my hands.

Having thus offered to you Internals, we shall now proceed to shew you the way of extirpating these Caruncles. The methods thereto proposed by Authors are various: I shall reduce them to two, viz. the one by Medicaments, the other by mere force with Wax-candles, probes of Lead, Silver, or Steel to tear and break them in pieces.

Whilst the Caruncle is recent, you may by the compression of a well proportioned candle crush it to pieces, and by the use of moderate detergent and exsic can

exsiccant injections dry and heal the part : but if there be an issuing of matter, as in virulent *Gonorrhœa's*, you must first remove that matter by purging, &c. before you can hope to extirpate the Caruncles. Nay, if the matter should flow much upon the use of the Candles, you must forbear further proceeding with them, and make Evacuation and Revulsion of that peccant matter, as hath been aforesaid, and then proceed again in the work.

In order to the search, you may place the Patient sitting upon the side of his bed, chair or stool, with his thighs opened, and his heels drawn back, so as he do not press upon the *perineum*. He must also at the same time lean forward with his body. Then make choice of a proportionable Candle, and having smoothed the end, and a little behind it, anoint it with Oyl (of Lilies if you please) pass it gently in, and move it easily forward, and by the warmth it gets in the *ductus* it may ply accordingly with it. If you meet with a stop, press moderately ; if it will not go by, draw it back, and take the exact distance the Caruncle lieth off, and mark it with your nail, then anoint it with Oyl, and pass it again into the *Urethra*, and when you come at that stop, raise the *Penis* with the other hand ; if it will not pass over that Caruncle, try another Candle made taper at the end : But if you be satisfied that it passeth beyond the Caruncle, it is a good sign, pull it out again ; and if the parts be heated, you may inject *decoct. hordei*, &c. and prepare your Candles for the consuming the Caruncle. The Medicaments I propose thereto are as followeth : *Rc cort. mali granat. acid. in umbra siccata. & pulveriz. ʒij. aluminis pulver. ʒj. emplastri de cerussa ʒj. misce super ignem.* Or, *Rc mer. præcipitat. rub. ʒj. calamin. ʒij. vitrioli calcinati ʒj. empl. diachalcith. ʒvj. ad ignem liquefacti.* You must scrape off the Wax from the end of the Candle, and dip the Wick in either of the Plaisters whilst they are scalding hot ; then after they are cold, shape them and smooth the ends for your use. This following Medicament hath great Credit amongst Authors : *Rc æruginis, auripigmenti, aluminis roche, chalcitidis an. ʒiv.* Infuse them in strong Vinegar, then grind them upon a Marble very fine, dry it in the Sun, and temper it again with Wine vinegar to the eighth time, drying it each time till it hath lost much of its corrosive quality. *Rc argenti spum. ʒij. olei ros. ʒiv. coq. ad empl. consistentiam,* then add of the abovesaid powder ʒij. it being well mixed, and of a good consistence, you may dip the bared ends of your Candles in it for the abovesaid use. Your great care in this work must be, that the emplaster be of such consistence as that it adhere as firm to the Wick as the Wax, for otherwise it will cause vexatious work. I commonly send a proportion of the foresaid Powder to my Wax-Chandler who mixeth it with a proportionable quantity of Wax, and makes me so many dozen of Wax-Candles, which Candles being so medicated do very often serve me in wearing off recent Caruncles, and also in cicatrizing the part.

If the Caruncles be of an older date, and be so big and tough, that you cannot pass with any of the Wax-Candles ; forbear farther attempting it, and endeavour by emollient Injections, Embrocations, &c. to supple and dilate the *ductus*. *Rc Rad. Althææ, lilior. an. ʒij. sem. lini, fenugræci contus. an. ʒj. coq. in aq. fontis ad lbij.* *Rc Colaturæ lbj. ol. amygd. dul. noviter extract. ʒij. Ms.* Inject some of it warm twice or thrice a day with a Syringe, having a thick blunt Pipe. You may also foment the *Perineum* with the residue of the said decoction ; or he may sit upon a Close-stool over some of the small decoction, or *ex radic. & fol. althææ, matric. viol. sem. lini, fenugræci, flor. cham. sambuci, meliloti, summitat. pulegii, origani, &c.* When he cometh off, embrocate the *Perineum* with *ol. expeditibus bovinis*, and apply over all some such like Cerote. *Rc unguent. Agripp. dialth. æspi, butyri recentis an. ʒij. ol. lilior. amygd. dul. an. ʒj. sem. lini, althææ, pulver. an. ʒvj. gum. ammoniaci ʒij. cera q. s.* To which may

be added *Argenti crudi extincti in terebinthina* ℥iij. or that Emplaster *ad sal-*
tionem. After three or four days make tryal again with a proportionable Can-
 dle, and if you can pass the Caruncle take the exact mark and pass in a medi-
 cated one upon the Caruncle, and leave it remaining there, cut off the end
 within an inch, and flat that end; then turn that broad end over the top of the
Glans, and fasten it close with a linen Rag: you ought to leave him more of
 the same Candles fitted for his use, that in case he urine he may take it out
 and put in another. Whilst he puts in the Candle he must stand somewhat
 straddling, and bow his Body forward, but as to his posture he will make choice
 of that to his own conveniency. The best time to begin this work may be at
 night, the Candle being then likely to stay in its place without disturbance.
 In the morning when you draw out the Candle inject some lenient decoction,
 and pass in a white Wax-Candle of a proportionable bigness to the other you
 drew out, to make good the way you have got, and yet to lenise the heat in
 the *ductus*; but if it be not disturbed, go on as you did to wash the Caruncle.

But if after the use of Emollients you cannot pass the Caruncle, you may
 well conclude it callous. In which case you may pass a *Canula* into the *Ure-*
thra to that Caruncle, and whilst you hold that there steady, you may convey
 a grain of caustick into the *Canula*, and press the caustick to it; and whilst you
 hold it there, you will perceive its operation by the pressing forward of the
Canula. The Caruncle thus consumed, cast in a lenient injection daily; and
 if you take notice of his Urine, you may see the separation of the sloughs as
 rags in it. After which you may by the common medicated Candles wear a-
 way the remainder, and with Injections cicatrize it. But if after the extirpa-
 tion of one Caruncle you meet with another behind it, and cannot pass it,
 nor a *Canula* so far as where the Caruncle lyeth, you may then attempt it by
 the Leaden Probe. Anoint it first, pass it to the Caruncle, then by pressing
 upon it break it off: You must expect a bleeding, and it is done not without
 pain, the *Urethra* being of exquisite sense: that pain is sometime accompanied
 with rigor and fever. In order to the stopping of the flux of blood you may
 inject the Royal Stiptick-water with *aq. plantag. ros. rub. &c.* proportionably
 as you see cause: or in case the pain be great, beat the white of an Egg with
aq. spermatis ranar. and inject it. Externally you may apply such like defensa-
 tive. *R. boli Armen. sang. dracon. cort. granat. aurant. myrtil. balaust. pul. an.*
3j. acet. ros. ℥ij. album. ovar. succor. plantag. equiset. q.s. Mf. But I never saw any
 inflammation or tumour arise from the use of these Probes. Fever I have
 sometime seen upon the use of them where there was no blood shed; in
 which case bleed them in the Arm presently and prescribe Clysters, and for-
 bear the use of your Probes some days.

After you have torn off the Caruncle, and that the fear of inflammation is
 over, you may make a search, and if the Caruncle be extirpated proceed in
 the drying it to a Cicatrix, which may be by a solution of *troch. albi Rhas.* in
 any of the forementioned distill'd waters, or as I said* with the Royal Stip-
 tick. A proportionable thick leaden Probe of a fit length and flat head rub'd
 with Quick-silver is also effectual. Small Probes are apt to be made brittle by
 the Mercury and break within the *Urethra*. But if you suspect some part of
 the Caruncle remaining, use the medicated Candle, and it will not only waste
 it, but dry it to a firm Cicatrix.

If there be Carnosity with Caruncles, your way is to dilate and supple it
 by Emollients as abovesaid. If a suppression of Urine happen, a large Cly-
 ster suddenly injected up hath frequently forced the Urine out of the Blad-
 der: but if that fail, a Catheter must help you, or an incision in *Perineo* thro'
 the Carnosity. If a flux of a virulent matter be accompanying the *Stranguria*,
 the last remedy is Salivation. If

If by reason of the long continuance of the Disease the *Urethra* be so straitened with the Carnosity and Caruncles, that the purulent matter cannot pass forth, which often happeneth when the Urine doth, you may well suspect an abscess will arise in some part; which if it happen within, there is danger of putrefaction. If the matter raiseth a tumour externally, and it do suppurate yet it commonly leaves incurable Ulcers. Therefore you ought upon the least suppression of this matter to make revulsion by Antivenereals; yea rather than to fail, raise a Salivation, and prosecute the Cure as his habit of body and greatness of the Disease requireth. And the while make way with Emollients to dilate the *Urethra*, or give vent by incision in *Perineo*, timely to discharge the matter.

The female Sex are not subject to such external apostemations. The Caruncles do not cause suppression, nor is the *Urethra* so subject to them. Sometimes they happen by the scalding of the Urine, but they are of easier cure. Yet the *Pudendum* is subject to excrescences of all sorts and figures. The *Vagina Uteri* is also subject to Ulcers, Excoriation, Excrescences and schirrous Tumours, with great flux of humours, the *Stranguria* and Inflammation, &c. therefore require your great care timely to resist them by Antivenereals. *Mer. dulcis*, and those milder preparations being apt to lead the humours downwards, are not so effectual here as the rougher sort which vomit. How they are farther to be treated by internals, and each disturbance removed or alleviated by external Medicaments, you may see among the Observations following.

One of about 30 years of age, troubled with a weeping and dribbling in making Urine, came to me. I suspecting Caruncles made a search, and found two little rubs in my way, and behind the Testicles in *Perineo* met a full stop, which the Candle would not pass; upon which I drew it out. He had been purged sufficiently by other hands. I began the Cure with emollient Injections as above prescribed, and fomented and embrocated the *Perineum*, and after a day or two I carried half a dozen of medicated Candles, and made another search, and took a measure of the place where the great Caruncle lay which made the full stop, and left him that Candle with others, shewing him how to pass them in, and encouraged him to make use of them in my absence, and to try what progress he could make; also advising him to use the Injection before and after the use of the Candle, and to continue the Embrocation and Plaster as he saw cause. During which his body was kept soluble by Clysters and healing decoctions; also balsamick Pills were prescribed. After three or four days I returned, and found the Patient had passed over the stop, but he had a little heated the *Urethra* by over-doing. I then left off the use of the Oyl in the Injection. He would have injected Milk, but I strictly forbade that in consideration of the mischief I have known it do in curdling in the Bladder. After the heat was calmed, he used the Candles with more moderation, keeping the passage open he had made. One night when he was going to bed I made him a visit and brought with me some medicated Candles, and having first flattened the upper end of one of them I passed it into the *Urethra*, and turned that end over the *Glans*, and with a soft Linen cloth over it bound it close on; He slept with it until towards morning, then pulled it out, and urined. In the morning I made a search and found the passage open. I injected some of the emollient lotion and passed in one of the common searching Candles, and bound it on as the former, and advised him to keep his Bed, or at least his Chamber that day, and in case of Urine to pull it out and inject a *collyrium* of *aq. plant.* and *syr. de ros. siccis*, and to put in another Candle the same night armed as before. By this method the main Caruncle wasted, and the lesser which lay in the way to that was consumed by the passing and lying on of the same Candles. I feel-

ing no more rubs left off the use of the Candles, and sent him an injection of *aq. plantag. rubi, equiseti*, wherein was dissolved a few grains of *lap. medicament. Crollii*, by which the reliques of the Excrecences were dried up, as also the weeping, and the Patient remained cured. Thus by shewing the Patients to use the Candles, they themselves have sometimes prosecuted their Cures at a great distance from me with good success.

2. Obser-
vation.

One having had many *Gonorrhæa's* and been frequently under Cure of Caruncles, came to me. Upon sight of the *Penis* I saw he had an issuing of much matter as in a virulent *Gonorrhæa*. I made a search for my own satisfaction, and met with several excrecences, and a full stop before I reached to the *Perinaeum*. The *Urethra* was tender and did not admit the Candle without pain: I began with the letting him blood, and purged him the next morning with Whey, *Manna* and *Cremor tartari*. After which I bathed him four or five times in warm water, keeping his body soluble the while with Clysters, or a bole of *cassia, ol. amygd. dul. syr. viol.* and the like. After he had done bathing I give him 25 grains of *mer. dul.* at night, and a Clyster the next day, and repeated the *mer. dul.* every other day, and syringed him with a lotion of *aq. plantag.* with a solution of *troch. alb. Rhaf.* But afterwards observing the *mer. dul.* not to answer my expectation, it having as I perceived been no novelty to him, I gave him gr. 8. of *turbith min.* which vomited him three or four times and gave him half a dozen large-stools, by which I believed the Mercury he had taken before worked downward. I ordered him a Clyster of milk *cum vitel. ovor.* that night to quiet his Bowels, and another the next day, and the day after gave him 12 gr. of *turbith miner.* which vomited him four or five times, and purged him twice or thrice. By the repeating of this Medicament twice or thrice, intermitting three or four days between, I lessened that flux of matter very much, but it making his chaps sore I purged it off with the bitter Decoction, and put him into a *decoct. sarsæ, lign. lentisc. rad. consolid. bistort. &c.* and give him of that Electuary with *terebinth. sal. prunella, &c.* also Clysters of *terebinth.* some time at night going to bed. Injections of *lap. medicament. Crollii* were afterwards used, by which the running ceased. I then made a search with a Candle, and having marked the main stop I proceeded in the use of French Candles, which were made taper fashion, and passed one over the great Caruncle bound it on, and left it lying upon it, and directed the Patient to take it out upon occasion of urining, and afterward to pass it again. By the use of that there was room made for the application of my own Candles, which I armed with that composition of *merc. precipitat. &c.* and thereby did wear off that Caruncle. Afterwards I met with others, which I also extirpated the same way; and with the solution of *lap. medicament. Crollii* and the use of Leaden Probes, I smoothed and cicatrized them.

3. Obser-
vation:

I was sent for one night to a man that laboured of a suppression of Urine with great pain about the *os pubis*. I intended to have passed a Catheter, but saw the head of the *Glans* hard as a Cartilage, and the entrance into the *Urethra* so narrow as I could scarce get in a small Probe. I was at a loss how to relieve him. I presently caused a large pint of milk to be warmed for a Clyster, and syringed it up quick, and of a sudden the Urine forced its way out in a great quantity. The Patient supposed himself to have the Stone, but I assured him the contrary, his disease being Caruncles with Carnosity, no better than the Pox in those parts, and more difficult to cure than any of the forementioned species of it. I let him blood that night, and purged him the next day with a decoction of *Cassia, tamarind. &c.* with an addition of *Manna, syr. ros. Damasc.* and afterwards bathed him three or four days, and then anointed with the mercurial Unction his Legs, Arms and *Perinaeum, &c.* by which I raised a salivation. It lasted

lasted about thirty days, during which he made Urine with more ease; yet upon search I found the Caruncles, but the Carnosity in the *Gland.* &c. resolv'd. During his salivating I cast emollient injections into the *Urethra* daily, and afterwards while he was in this course of sweating and purging I began to work with the Candles, and made way with little difficulty till I came into the *Perinæum*, and there I spent some days in endeavouring to pass a small taper Candle without success. Wherefore I attempted it by the force of a Leaden Probe, and brake the Caruncle off. It bled 3 or 4 ounces, but I stopped it by injecting *aq. sper. ranar.* with a few grains of *lap. medicament. Crollii*, then embrocated the *Perinæum* and parts about with *ol. ros. cum aceto*, and applied an *empl. è bolo* over them. The next morning I found he had not urined much better. I injected again, and passed in a Candle, and perceived that Caruncle eradicated, but I met with another behind which I could not pass, I again used Injections, and passed in a taper Candle, by which I gradually proceeded, and afterwards by armed ones I freed that passage, and his Urine came away in a full stream. I prosecuted the cure with medicated Candles and drying Injections, and continued the use of Sudorifick Decoctions and Astringent Pills till he was cured. Yet some while after he came to me again complaining that there was a Caruncle near the end of the Bladder which hindered his passing the Candle into the Bladder, such hath been the complaint of others, but that Caruncle was natural.

One came to me having had many *Gonorrhœas*, and in his latter years much difficulty in Urine. I made a search and found he had Caruncles, and one within half an inch of the entrance into the *Urethra*. We agreed upon the Method of Cure, and I was to begin my work the next day, but heard not from him till about a year after. It seemed he had been that while in other hands, who had proposed an easier method of Cure but failed. Yet the urinary passage was thereby more enlarged, so that the Patient could better admit of the Candles, and was also the more observant to my Rules; but then again there was a flux of matter which required to be removed. To which purpose I began with a dose of *turbith miner.* and by the repeating of it made revulsion and salivated him. During the Salivation I fomented and embrocated the *Perinæum*, and injected emollient Decoctions, and by Candles prosecuted the extirpation, passed the lesser Caruncle, and afterwards pressing upon the bigger with a proportionable big Candle I brake it, and permitted it to bleed, and then passed a medicated Candle over that broken Caruncle, and by the pressure of it wore that Caruncle off smooth. There was another Caruncle that lay behind this in *Perinæo*, which I also made way over by a taper Candle, and afterwards by the pressure of my medicated Candles I wasted them. During which he passed through a course of purging, sweating, &c. and finished the Cure by the use of Astringents as well inwardly as outwardly.

A Man who had been long diseased with a weeping *Gonorrhœa* was commended to me for Cure. By making his Urine and search I found that he had Caruncles. I proceeded by Injections and Embrocations to make way for my Candles, and cleared my passage into the *Urethra* to the *Perinæum*, and endeavoured by taper Candles to make my way over the rest. But the Patient not keeping his Chamber made my work irksome to me. Whereupon one morning I took a Candle proportionable to the *dudus*, and having smoothed one end I dipt it in Oyl, and passed it readily to the Caruncle, and whilst it was stiff I pressed hard upon the Caruncle to break it, and did so; but at that very instant the Patient was seized with a rigour, and in pulling it out the blood followed. I injected a Solution of *pul. bol. Armen. in aq. sperm. ranar.* and stopt the bleeding; but after that rigour the Patient burned and lay distempered all night, and in the morning I found him in a Fever, yet he had no considerable

pain in the urinary passage. I applyed Refrigerants externally to the *Perinaum*, and let him blood, and consulted a Physician. He was brought very weak by his Fever, but recovered, (as I thank God I never had one dyed upon this account.) From that time he would make no more use of Candles, but put me upon the use of Injections, of which I tryed many sorts; the best was a Solution of *lap. medicament. Crollii*, by which he made water better, and to this day enjoys a good health.

6. Observation.

One about 50 years of age who had laboured long with Caruncles, finding his Urine to come daily much more difficultly away, sent for me. I made a search and found a rub before I had entered an inch into the *ductus*. I began by purging him with an opening apozeme of *cassia, tamarind. rad. gran. &c.* and let him blood, then having relaxed the *Urethra* by Emollients, I proceeded with the Candles, and by degrees made way till I came to a Caruncle near the Testicles. I endeavoured to pass that with taper Candles, and after some while made way and applyed armed ones for some days, and wore that Caruncle down, and passed in towards the *Perinaum*, where the passage was extremely strait, and a Caruncle stopt our going forwards. In pressing upon it, the Patient was immediately seized with a rigour. I pulled out the Candle whole, and without blood. The next day I found my Patient in bed without pain or Fever; yet I let him blood, and gave him a Clyster. The day after I purged him with the aforesaid Apozeme. The next day I made a search, and passing a Wax Candle into that strait passage he began again to fall into a rigour. Whereupon I desisted, and contented my self in the making good the way I had gotten by putting in a proportionable thick Leaden Probe (which had been rub'd with Quick-silver) some days, which Probe had a flat head as broad as a three-pence to retain it from slipping in. I repeated the use of Emollients and mercurial Emplasters to the *Perinaum*, and whithal made revulsion by a vomit of *turbith mineral.* and by repeating it I raised a Salivation, which lasted longer than I intended, but it served my purpose so well as I afterwards made way over that Caruncle in *Perineo* without danger, and by armed Candles wasted it. Then with detergent Injections and medicated Candles smoothed and healed the *ductus*, and left him a free and easie passage for his Urine, and concluded that course of Physick with purging sudorificks, &c.

7. Observation of excrescences.

I was fetched to a young Woman who had been long diseased with a *Gonorrhœa*, and cured thereof, but from the internal excoriation thereby the *pudendum* was over-spread with many excrescences of a spongy soft flesh of different size and shape. Those on the more external parts were callous. I prescribed the injection of *summitat. rubi*, &c. and let her blood purged her with whey and *manna*, and afterwards with the bitter decoction, sometime giving her *℞j. calomel.* over night in a *Bolus* with *conf. boraginis*. Having thus as I thought prepared her body, I began to proceed in the extirpating of the excrescences, but observing the fluxion great, I deferred the work, and made revulsion by a dose of *turbith. mineral.* which the third day after I repeated again, and between while prescribed Clysters and lenient purgatives, and added *unguent. Egyptiacum.* to the injections. By this method I diverted the fluxion, and began my work with the cutting off those excrescences in the most external parts, and eradicated them by caustick-stone, and *ol. vitrioli*, and so proceeded with one after another as they lay in my way till I was prevented with the bleeding of them. Then washed the parts with oxycrate and stopped the blood with dossils dipt in a solution of *lap. medicament.* some hours after; the bleeding being stopt, I rubbed the remaining roots of them which I had cut off with a Vitriol-stone, then with a pair of Scissor or Knife, according as they were seated, cut off the rest, and stopped the bleeding as before,

fore, and from that time consumed the remaining roots by the help of the Vitriol stone, Oyl of Vitriol or Caustick-stone, and appeased the pained parts with *decoct. hordei, sem. cydonior.* &c. and afterwards cicatrized the ulcerations, as hath been elsewhere shewed in the like cases. But it was a difficult work, and not effected without *turbith mineral.* which was repeated often, and afterwards *decoct. sarsæ, sweating and purging,* &c. finished the Course.

A Woman of about forty years of Age, of a full body, having been some years diseased in the *matrix*, as was supposed with a Cancer, consulted me; I made a search, and felt a hard Tumour on the right side of the *Vagina Uteri* of the bigness of a Pullet's Egg fixed between the Tunicles, neither ulcerated nor painful to the touch, yet there seemed to discharge much serous matter from thence. There was also a descent of the *Uterus*. Upon a further enquiry into the cause of this Tumour, I perceived she had been frequently subject to diseases in those parts, and that they were Venereal. Upon which account I supposed this Tumour to be so, and having well informed my self, that the courses of Physick she had taken before were upon another account, I presuming a better success by Antivenereals, attempted the Cure, and began with Venesection, taking about zviij. of blood from her Arm. That day a Clyster was Administred, and the next day I purged her with *elect. diacassie cum* ʒj. calomel. and afterwards repeated *calomelanos* three or four times, every other night ʒj. with *conf. ros. rub.* and prescribed her an emulsion *ex sem. 4. frigid. maj. cum sem. papaver. alb. &c.* in a *decoct. sarsæ*, aromatizing it with *aq. cinamom. hordeat.* and sweeten it with Sugar. I also prescribed this Injection: *R. fol. plantag. virg. aureæ, alchimille an. Mj. summit. centaur. utrinque an. Pj. rad. iridis ʒij. coquantur in aq. fabror. ad lbij. colaturæ adde syr. de ros. siccis, and de pilosella an. ʒij. injiciatur manè & vespere.* Afterwards observing that the *calomel.* did work downwards, and rendered the *puendum* more slabby, I gave her a dose of *turbith min. ʒß.* which vomited her four or five times, and purged her as often. I repeated it the fourth day, and perceiving the revulsion it made, I increased the dose, and gave it the third day after, and again till it salivated her, and thereby took off the fluxion and pains. In the declining of her Salivation, I put her to the drinking of a *decoct. sarsæ*, and purged and sweat her with *Bezoard. min. gum. guaiaci,* &c. and by a strict diet concluded the course, and resolved that Tumour as she then thought. Whether it totally dissolved I know not, but she hath continued since very well.

A Man aged about fifty years, by the suppression of Urine and virulent matter was gangrened on the right Testicle, and that part of the *perineum* lying next to it, the Urine passing thereofth. I scarified the gangrened parts, washed out the Blood with Salt-water, fill'd the incisions with *merc. præcipitat.* and dressed it up with *unguent. Ægyptiac.* hot, with a Cataplasm over all of *medul. panis triticeæ, pul. summitat. absinth. scordii,* &c. decocted in Brandy-wine. I then let the Patient blood, Prescribed him a Clyster, and a Cordial Julep. The next day I saw the *Eschar* separating in *perineo* and was satisfied that the Urine came all that way. I fomented with the *Fotus* prescribed in the Chapter of *Gangrene*, and dressed it with *unguent. basilicon,* and a few drops of *ol. terebinth.* mixed with it, and continued the use of the Cataplasm. By these applications the slough separating I deterged with *mundif. Paracels.* and purged the Patient with *elect. lenitiv. and calomel.* and prescribed him a *decoct. sarsæ.* After deterfion I incarned with the same mundificative; adding to it *pul. thuris, sarcocollæ, myrrhæ, aloes* and *syr. de ros. siccis,* and with the Vitriol-Stone dried the loose flesh, and cicatrized it with *aq. calcis,* &c. In the time of incarning his Urine passed somewhat by the natural way, and at the last it passed better. The Cure was finished by purging, sweating,

8. Observation of a scirrhus tumour of the Vagina uteri.

9. Observation of a Gangrene upon suppression of Urine.

ting, &c. as I am accustomed to do in such cases. He is since married to a young Woman.

10. Observation.

In the Year 1652. at my return to *London* from the Battel at *Worcester*, I somewhat assisted that most excellent Chirurgeon the deceased Mr. *Ed. Molins* in dressing his Patients; amongst which I saw his Practice in the most difficult cases of this Disease, whereof I shall give you one of his Operations.

An old Fornicator, having been long diseased with a Carnosity, which had resisted all endeavours, and in a manner totally suppress'd his Urine, sent for him; he went, and caused the Patient to be taken out of Bed, and placed upon a Table, with his Legs drawn up, as in the cutting for the Stone; he cut into the *Urethra* near the neck of the Bladder, it was hard as a gristle. His knife did not readily divide it, but so soon as he had, the Urine gushed out, which being discharged, he put in his finger into the *Urethra*, and afterwards enlarged the incision upward more to the *Scrotum*, then dressed it up with his green Balsam warm, by which in few days it digested, and the Patient was relieved: the lips grew also daily softer, and the wound healed apace, but all this while the Urine had no other passage, the common *ductus* being so closed up by reason of the Carnosity, that we could not make any way into it with our smallest Probes or Candles. Upon which consideration it was thought necessary to keep this opening in *perinaeo* for the discharge of Urine, and in order thereto it was dressed up with a Dressing, an Emplaster and Compress, which the Patient took off at times to ease Nature. But this not satisfying him, he frequently complained of his unhappy condition; insomuch that Mr. *Ed. Molins* being wearied with the Patient's solicitation, took me one morning along with him, where again he placed the Patient as before, and attempted to make a way from the *Apex* into the *Urethra*, but it was in vain. Whereupon he caused one of his Servants to hold the one Leg, and my self the other while he took up the Testicles, and put the one into my hand, and the other he placed in the hand of his Servant; then with his knife divided the *Scrotum* in the middle (we holding each Testicle the while in our hands) and cutting into the *Urethra* slit it the whole length to the incision in *perinaeo*; then with a needle and thread stitch'd the skin over the *Urethra*, as also the *Scrotum*, leaving the Testicles covered, as before, and dressed them with agglutinatives, by which they were cured in few days: But the Urine nevertheless continued to flow by the opening in *perinaeo*.

11. Observation.

A lean withered old Man, near 70 years of Age, having in his younger years had many *Gonorrhæas*, complained in his latter years of difficulty in making his Urine, and that he voided much matter. He sent for me, and would needs have his Disease to be the Stone, and that matter to proceed from an Ulcer in his Bladder. I endeavoured to inform him better, but observing him so wise, I was well enough contented he should report it so, and concerned my self no further with him, than by the prescribing him an Emulsion. About a year after, his Urine being in a manner suppress'd he sent for me again; I made a search, and found the entrance into the *Urethra* eaten away below the *frænum* with part of the Prepuce, and the passage there into the *ductus* difficult to find; and after I got in, it was so strait and stuff'd with Caruncles, that I could make no way either by Probe or Wax-Candle. I ordered him presently a Clyster, supposing thereby to force the Urine out; but it would not. I then propos'd the cutting into the *ductus* below, but he would not. The retention of the matter in the Seminals soon after rais'd a Tumour beneath the *Scrotum*, which being exceeding painful, he was contented I should make an opening to let his Urine out. I placed him in a clear light, with his legs drawn up, as in the former Observation hath been said, and made an incision into the
Urethra

Urethra near the neck of the Bladder : which having done, and satisfied my self by my finger, and discharge of his Urine, that I had made opening enough, I dressed him up with the Spanish Balsam, there being no blood lost in the work, save what came from the skin, the *Urethra* it self being cartilaginous. From that time I only dressed the Wound with a Dossil dipt in the same Balsam, and applied a Pledgit over it, with an *emplast. diachalcit.* and Bandage to retain it on. To the swelling above I applied a Cataplasim *ex rad. & fol. hyoscyami, cicuta, &c.* by which the Tumour resolved, the matter indeed discharging with the Urine by the opening. There was not much care taken in dressing this Ulcer, for in 7 or 8 days it contracted, and being callous could not unite, if the Urine would have permitted it, but it had no other passage. The Patient was hereby greatly relieved, and had no other trouble but to Urine this way, which I thought he would have been well pleased with, and rejoiced in the having such an easie discharge : Yet after some Months he made me many Visits, maundring as if I had done him a discourtesie in leaving such an opening. Whereupon to quiet him, I gave him some searching Candles, and wished him to go home, and try if he could find any passage from the *Apex* into the *Urethra* to the Bladder ; if he could, I would readily heal that Ulcer *in perineo*, otherwise I wish'd him to consider how he would Urine : upon which he became more satisfied. He lived some years after, and died of Old Age.

One having been long troubled with a difficulty in Urine, was at last seized with a Tumour *in perineo* hard and painful. I was fetch'd, and seeing it would tend to suppuration, I dressed it with a Cataplasim *ex rad. althææ, lilior. &c.* and having suppurated it, I opened it by incision, and discharged a quantity of matter. In the dressing of it daily I observed much gleet, which I discovered after a while to be Urine mixed with the matter, and upon search found Caruncles in his *Urethra*. I perceived the cause of the abscess, proceeded in the Cure with Candles, &c. as hath been set down in the method of Cure ; and having cleared that passage, and made a free way for the Urine, I made search into the abscess, and laid it open by incision according to the length of the *perineum*, and from that time hastened the incarning and agglutination of the Ulcer as well by internals as externals, and in few weeks cicatrized it smooth and firm.

One having contracted a *Gonorrhœa* beyond Sea, and not being well Cured thereof, in progress of time Caruncles arose, and a difficulty of Urine followed. After he had spent some time in endeavouring his Cure abroad, he returned toward *England* ; but in his journeying through those hot Countries, an abscess arose amongst the Seminals, and discharged its matter under the *pubis*, and afterwards between the Testicles, and in three or four places of the *perineum*, and on both sides of it, by reason of which the Patient lay long by the way, and was at last with much difficulty brought to *London*, Sir Fr. Pr. and my self were sent for. We saw the Patient miserably emaciated, and so diseased as I have said. Decoctions of *sassa*, with Pectorals, Emulsions, Cordial Juleps, Balsamicks, also lenient Purgatives with *calomel.* were prescribed, and much pains was taken in the Chirurgery, but he not being capable of the great Remedies, our work proved unsuccessful, and he removed into some of the neighbouring Villages to drink Ass's milk, and to try how he could nourish himself in the fresh Air, where I think he died.

Another who had spent his younger days loosely, languished in his old age with a Carnosity, whereby the Urine was straitned in its passage forth, and the feminal Vessels within the *pelvis* corrupting inflamed the neighbouring Tunics of the *rectum intestinum*, and passed its matter into that gut and discharged it by

by stool; yet not so entirely, but that it afterward made a way lower out between the *anus* and *perineum*, by which ways he had also pollutions. His case was deplorable, but the way to cure him if possible had been to have made revulsion and evacuation of that matter by Salivation, and afterwards by laying open those *sinus's* as in *fistula ani*: but this was a poor man and not governable. He lived some years by the charitable assistance of Mr. *Ed. Molins* and my self, and at last was found dead in the street.

15. Observation.

The same year I came from the Wars to *London*, I was sent for to one who laboured of an abscess *in ano*. He discharged a purulent matter in great quantity. I consulted the late deceased Mr. *Ed. M.* who upon search with his finger *in ano* concluded it to arise from some abscess in the prostates, and to be the effects of a *Gonorrhœa* ill cured. Which being confessed, we dressed the Ulcer, and prescribed some little remedies. A day or two after we met again, made a search with a Candle into the *Urethra*, and discovered Caruncles, which was also apparent by his pissing. The Patient was much pained by the searching, and desired that work might be forborn till his Ulcer *in ano* was better disposed. Upon which my friend declined his Visits. The discharge of that virulent matter fretted the parts without, and enlarged the opening into the *rectum intestinum*, so as upon passing my finger *in ano* I felt it, and by a curved Probe, found the *sinus* tend to the *perineum*. Upon which part I applied a Caustick, and afterwards made incision into the lower part of the *sinus*, whereby the matter was partly discharged. But he had little advantage thereby, his disease being Venereal, required a severe course of Physick: But he not submitting to it, the matter afterward apostemated that buttock, and discharged it self through many Orifices. He lived 17 years thus and followed his employment abroad.

16. Observation.

One having been many years afflicted with the reliques of a *Gonorrhœa*, it at length brake its way downward and raised an abscess under the *pubis*, and through want of sufficient vent corroded the *Urethra*, so that his Urine came thereout. He had also a continual weeping of a virulent matter by the *penis*, and passed his Urine in a small stream and frequently forked. I began the Cure with a purging decoct. of *cassia* and *tamarind*. &c. then let him bleed, and afterward purged him with *pul. cornichini* and *mer. dul.* and repeated it once in three days: all which time he continued his own way of dressing the Ulcer with Precipitate. But after I had a while purged him with Mercurials, I scraped off the crufted precipitate, and dressed it up with Pledgets dipt in *tinctura vitrioli*, and applyed a compress over them with good Bandage, and renewed the Dressings once in 2 or 3 days, during which I gave him ten grains of *turbith mineral*. by which I made revulsion of that peccant Matter. The second day I repeated the *Turbith*, and gave him another Dose of the same the third day after, and purposed to have raised a Salivation; but finding the Patient not able to bear any thing of that kind, I forbore the further proceeding thereby, and by Clysters and lenient Purges carried the Matter downward. The Ulcer being cicatrized, and the *callus* resolved, I threw off the Bandage, and concluded him well thereof. Whilst I purged him to carry off the Salivation he spit the more, and his Mouth grew sore, which put me upon indulging him the longer; but as his Mouth healed I purged him again, and kept him to the drinking a Decoction of *Sarsaparilla*, &c. and began to make way with Candles to extirpate the Caruncles; but the fistulous Ulcer being cured, he would not believe the extirpating the Caruncles necessary. Wherefore I submitted to his pleasure, and finished that Course of Physick.

T A B L E

Of the several

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